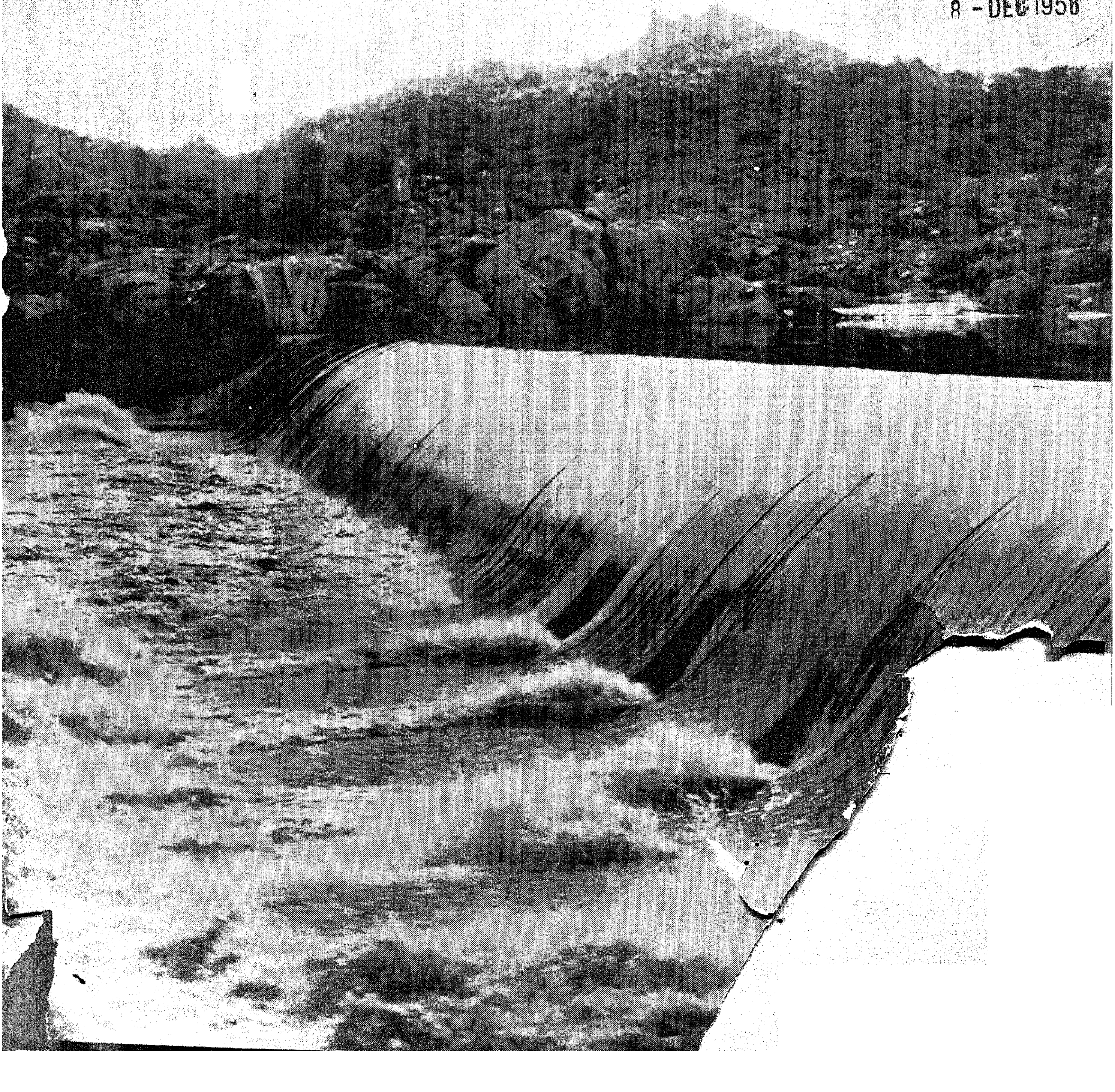
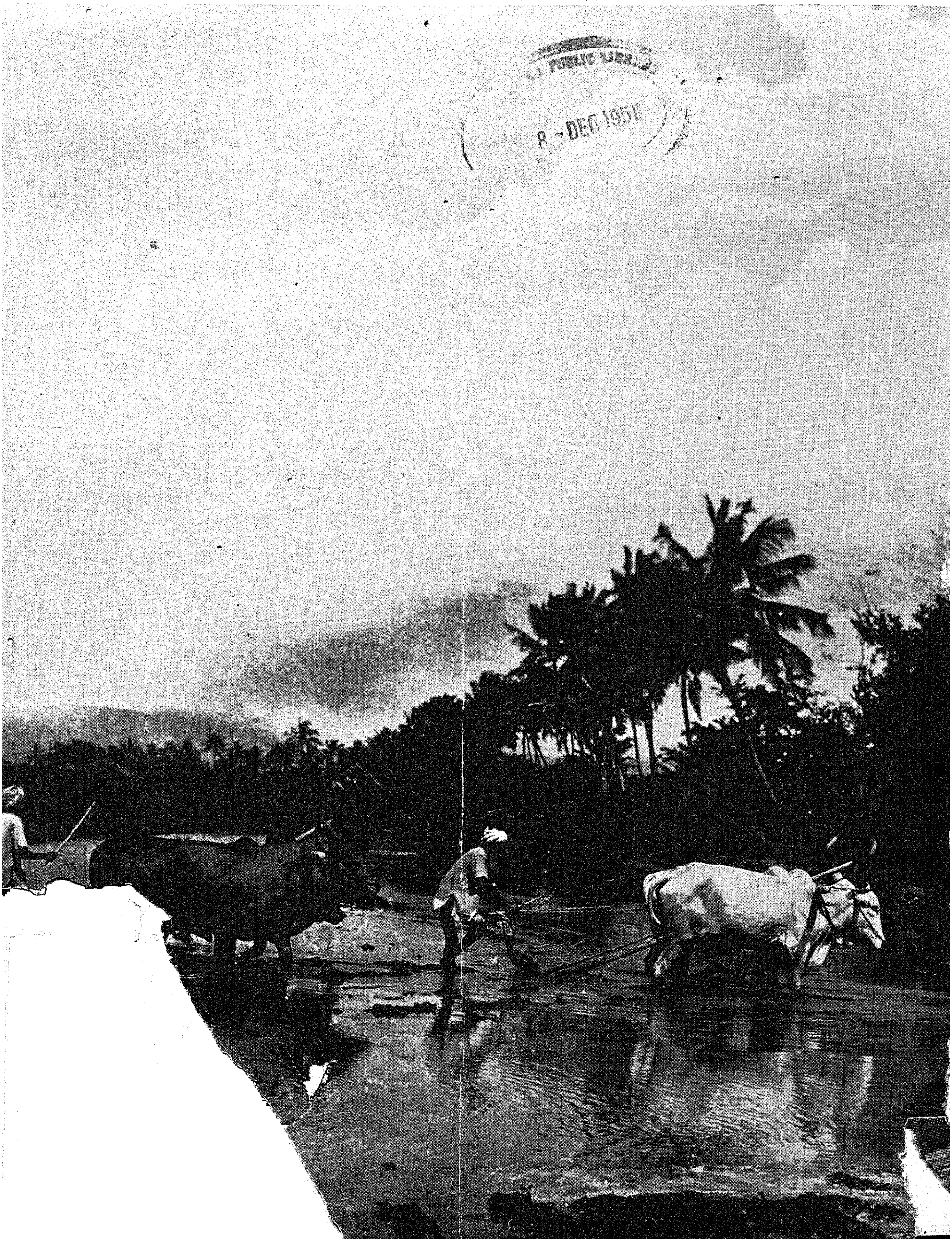
MADRAS Information

8 - DEC 1956

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Madras Information

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Cover Picture : Ponniar waters Rushing through Pick-up Canal of Sathanur Project.

Legend of fourth inset page—

(1) "Composition" in oils by R. Krishna Rao.
(2) Life of Buddha Mural in oils by K. C. S. Paniker.
(3) "Prayer Time" Plaster sculpture by S. Dhanapal.
(4) Labourer in oils by T. Krishna Rao.
(5) "Fibre Making" in oils by Shanti Shah.
(6) "Sacred Hour" in oils by C. J. Anthony Das.

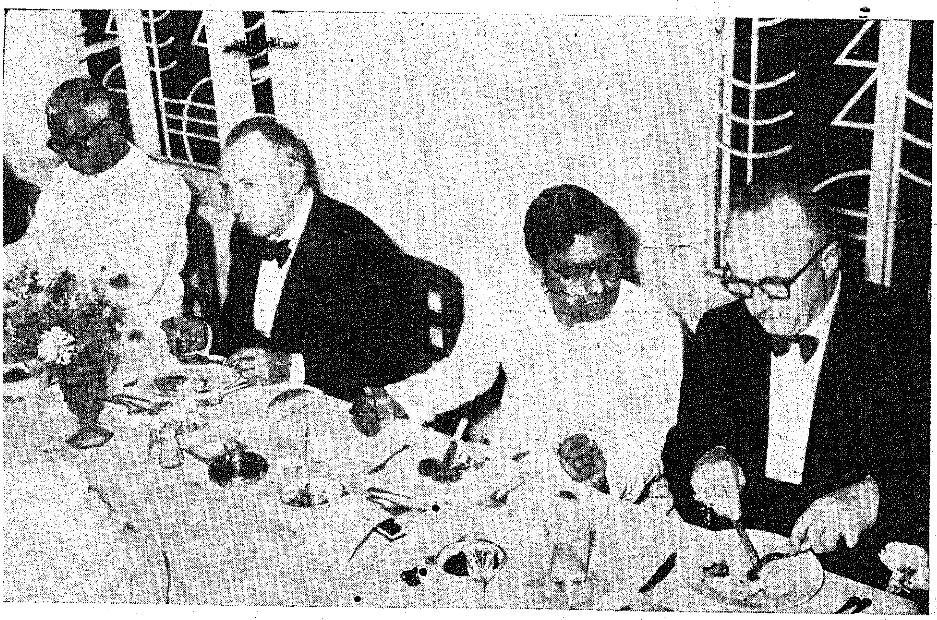
8 - DEC 1956

Madras City Milk Scheme

Towards Cheap and Wholesome Milk for the People

The question of reorganising the milk supplies of Madras City has been engaging the earnest attention of Government for some time now and many Expert Committees had been appointed by them from time to time to investigate and suggest ways and means for improving the same. According to the reports submitted by these Committees, a total quantity of about 230,000 lb. of milk is consumed daily in the city, of which about 160,000 or 69·6 per cent is produced from within the City and about 70,000 lb. or 30·4 per cent is imported from the surrounding villages. For the production of such a large quantity of milk within the City, a very large number of milch animals has to be maintained inside the City. The milk trade in the City is mostly in the hands of petty milkmen and as the City has no milk pocket nearby the milkmen are forced to keep their cattle within the City limits.

A vast majority of the milkmen live in rented houses and keep their cattle also in insanitary rented cattle sheds which do not have any moving space for them. The conditions in which the animals are housed and milk produced for sale hardly satisfy the standard of sanitation and animal husbandry. The result is that not only the health of the cattle deteriorate but the health of the people living in the houses and in surrounding areas are injuriously affected on account of the dirty environment and the consequent prevalence of the fly menace and the inadequate and insanitary disposal of sewage from the cattle sheds. Although the City Corporation has framed adequate rules regarding the maintenance of private cattle yards in the City, for some reason or other these rules are not strictly enforced. In congested



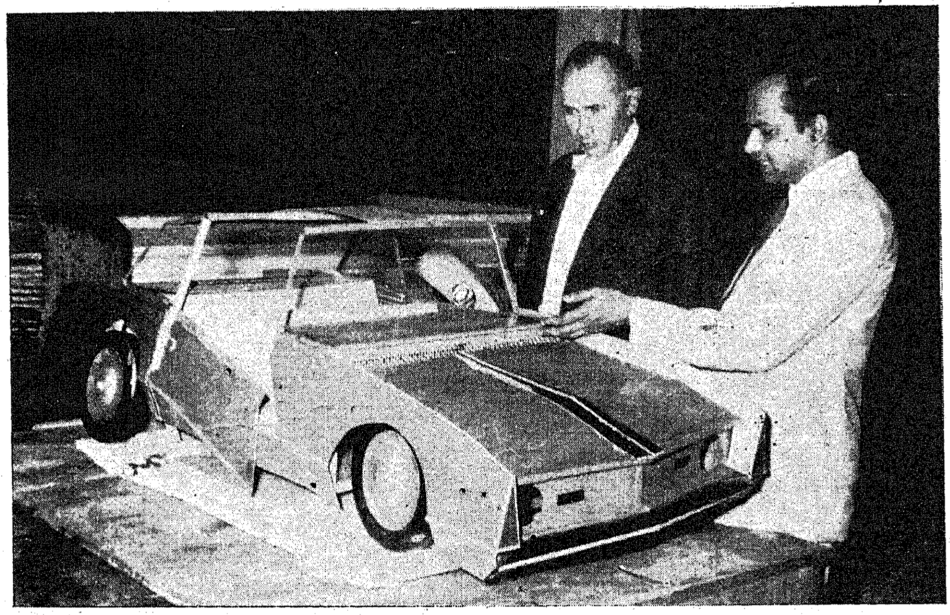
WEST GERMAN INSTITUTE TO BE SET

Following the West German Government's offer to establish an Institute of Higher Technology in India, a high power delegation led by their Education Minister visited India to choose the location for the proposed Institute. When the deligation visited Madras last month, Sri C. Subramaniam, Minister for Education, spared no pains to

areas like Triplicane and Georgetown where there is no open space, it is not possible to enforce the bye-laws that there should be no cattle shed within a prescribed distance from human habitations.

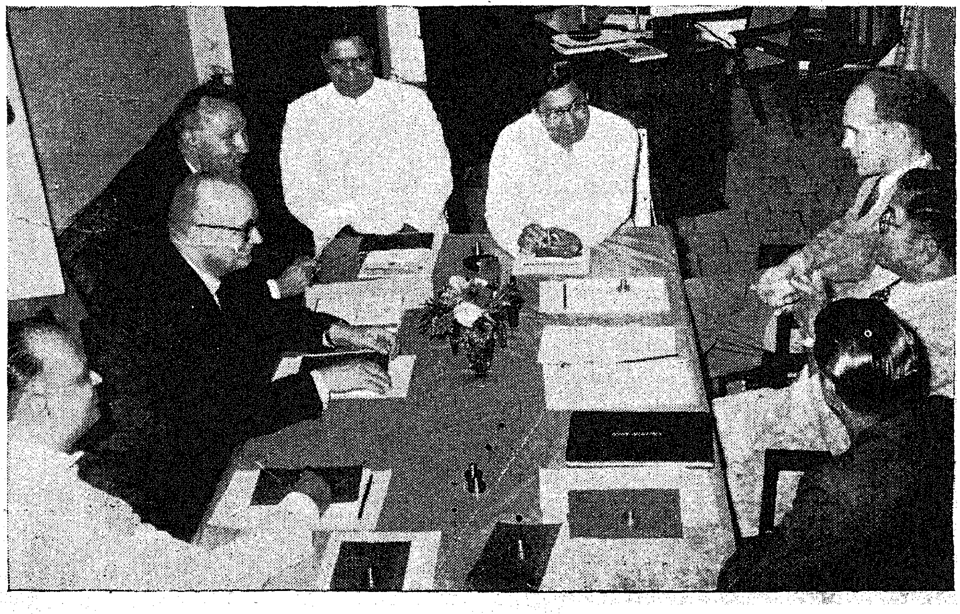
The milkmen usually purchase freshly calved animals of good quality. But facilities for salvaging dry animals being negligible, after the lactation is over the cattle are disposed of for small sums as the milkmen are unable to maintain the dry animals under the expensive conditions of the City. Not only the animals purchased by the milkmen are spoiled by keeping them in stalls in the congested locations of the City, but their valuable calves also are got rid of at the earliest opportunity, as the milkmen consider them a liability. However the trade has to be maintained for which some 25,000 milch animals valued at more than a crore of rupees are imported annually. The prices of cattle fodder are also very high. To compensate the heavy expenditure incurred in maintaining the trade the milkmen sell milk at a higher rate or adultering it before sale by adding water or reconstituted milk.

The experts have suggested that for the reorganisation of the milk supplies, the City cattle should be evacuated and settled with their owners in cattle colonies outside the City. Accordingly, the Director of Animal Husbandry put up the Madras Milk Scheme. This Scheme contemplates to evacuate all the cattle from the congested areas of the City and at the same time offers accommodation for about 4,000 milch animals of commercial standard with their owners in a cattle colony to be established in the outskirts of the City. Besides the City cattle there will be in the colony, a Government Dairy Farm Unit with 750 pure-bred cattle. For this purpose a 600-acre plot has been selected at Madhavaram village which is seven miles North-West of the City and within two miles from the Corporation Sewage Farm at Kodunganyur village. The site is at present lying mostly waste and the acquisition of the same for the cattle colony will not affect in any way the local agriculturists. On the other hand, the colony, when it functions, would provide enough work for the local labourers all the year round. Another area of 200 to 400 acres of land contiguous to the proposed site has also been proposed to be acquired for the expansion of the colony. The water availability on the colony has been found to be fairly satisfactory. Electricity could be tapped from the high tension main passing through the villages. The Health and Sanitary experts have also given their opinion that the



OF HIGHER TECHNOLOGY UP IN INDIA

impress the visitors with the claims of Madras, across conference table and dinner table. The delegation also visited the technological institutions in the City, including the M.I.T., Chromepet (top right) and the Central Leather Research Institute, Guindy (top left).



establishment of the cattle colony and the sewage farm at Madhavaram and Kodungayur respectively will not in any way affect the health of the people in the surrounding villages. It is also proposed to form a straight approach road branching off from the Northern Trunk Road from Moolakadai junction between the fifth and sixth miles to reach the southern limits of the colony.

Quarters for Milkmen

Milkmen owning 10 and more cattle will be provided with quarters in the colony. Buildings also would be constructed to accommodate the cattle. Provision has also been made at the colony for other amenities such as school, dispensary, shop, etc. Assured supply of water is essential for the colony for cleaning the sheds at least twice a day for drinking and washing of the cattle. For this purpose it is proposed to sink two wells, one at either end and connect them to a R.C.C. overhead tanks 50,000 gallons capacity in a central place. Necessary pump sets and net work of pipes will be prescribed for ensuring supply for the entire colony. Each house will be provided with a tap and F.O.H. Adequate drainage and facilities for making compost manure from the enormous quantity of dung that the cattle will excrete every day will also be provided in the colony.

The principle underlying such a comprehensive scheme as this is to ncrease the milk production so as to raise the present low per capita consumption and ensure that the consumers get pure and wholesome milk. Ensuring the purity of milk is an important aspect to be considered in any milk scheme. So whoever be the agency or agencies fixed for the collection of milk the entire quantity of milk brought into the City should be pooled, tested for quality, processed and distributed by Government. An efficient quality check can also be done before the milk is accepted and payment made according to the quantity. A central dairy will be established for this purpose in a central place for pooling all the milk imported into the City. It has been proposed to locate the dairy factory at Aminjikarai and a suitable place extending to 60 acres has been selected near the Indian Medical School Herbarium for the purpose.

A well-equipped central dairy has been designed for keeping in view the present requirements and future expansion. The dairy will have in the first instance up-to-date plants and machinery capable of processing about 1·5 lakh lb. of milk per day. This capacity will be gradually increased to 3 lakhs lb. per day by installing additional machinery later on when sufficient milk is made available. The milk collected from the cattle colony and other sources on arrival at the central dairy will be subject to a quality central test. For this purpose, a well-equipped dairy laboratory capable of analysing 250 samples a day will be established in the dairy.

Government Dairy Farm

In addition to the City displaced cattle, the colony will maintain a Government stock of pure milk breeds, numbering 750, including milch and dry cattle. The stock will include scindies and buffaloes of Murrah and Mahsana or Sunti breeds. The occupation of the Government cattle will be subject to the same conditions applicable to the City cattle but a separate block of cattle-sheds will be set apart for them. The milk drawn from them will be sold to the Government Dairy for processing and distribution.

The proposal for the Government maintaining a stock of pure-bred cattle in the colony, is made with a view that not only it will supplement the existing low milk production, but it will also serve for raising pure-bred bull calves for distributing to the surrounding areas for upgrading the village cattle. The cattle colony will maintain only the milch stock, their suckling calves and the nursing pastu-ration animals.

The weaned calves, both bulls and heifers and the dry animals will be maintained at the Government Dry Stock Farm proposed at Alamadi at a distance of about six miles from the cattle colony.

Government have now sanctioned an expenditure of Rs. 112·5 lakhs for the cattle colony and central dairy to be located at Madhavaram. The target of this scheme, which will be spread over a period of five years, is to colonise 3,250 City milk cattle and 750 Government owned pure-bred cattle with their followers. It is estimated that at the end of the fifth phase of the scheme some 150,000 lb. of milk will be handled at the colony, which would effect a profit of Rs. 4·7 lakhs.

THE ARIYALUR TRAIN DISASTER

MADRAS GRIEVES WITH THE BEREAVED

The Government have heard with deep regret that the down Tuticorin Express which left Madras on the night of November 22 met with a serious accident between Ariyalur and Kallagam Stations during the early hours of November 23. They have been extremely distressed to note that the death roll has mounted to about 145. Many passengers have also suffered injuries. Every effort is being made to rush succour to the accident spot especially to minimise the sufferings of the passengers as far as it lies within the hands of the authorities. Government extend their most sincere and heartfelt condolences to those who have been bereaved by this tragedy and sincerely hope for the speedy recovery and the restoration to full health of those who have suffered injuries.

Facts and Figures

There has been an increase of Rs.112·12 crores in total foreign investments in India between 1948 and 1953.

The Indian Government railways lifted 114·05 million tons of goods in 1955–56—7·8 per cent more than in the previous year. Goods earnings during this period improved by Rupees 21·48 crores (or by 13·8 per cent) to Rs. 177·43 crores.

Significance of Gosamvardhana Day

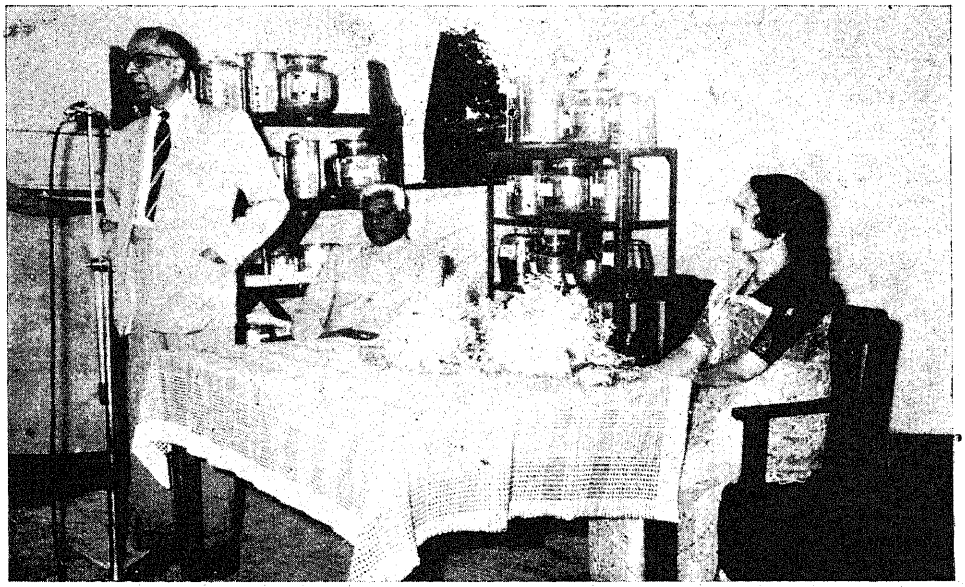
The Gosamvardhana day is celebrated every year to bring home to people the correct appreciation of problems of cattle development through organizing and intensifying such measures as distribution of selected breeding bulls, mass inoculation of cattle against contagious diseases, segregation of unproductive stock to Gosadans, introduction of improved varieties of fodder seeds, and adoption of improved cattle husbandry practices. This year the celebrations were organized on a much wider scale and special emphasis was laid for their organization in rural areas through panchayats and otner local bodies.

Key Village Scheme

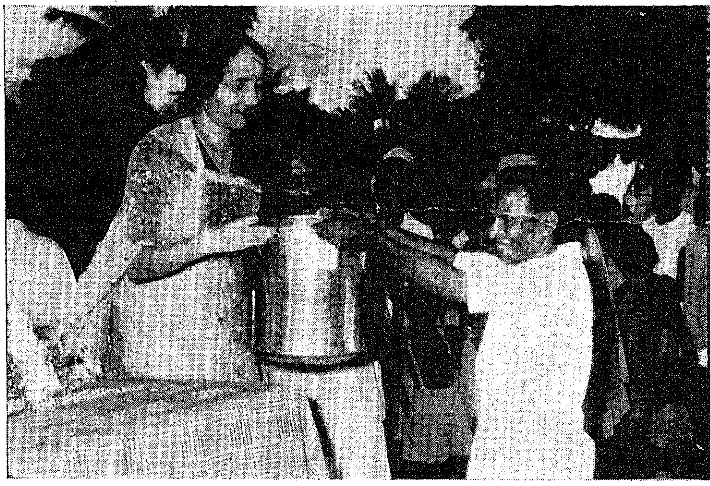
The Gosamvardhana Week, this year, has a special significance. It is the first year of the Second Five-Year Plan. The development of animal husbandry and dairying has been given a greater importance in the Second Plan with a provision of Rs. 56 crores for the purpose. The Key Village Scheme for the development of cattle launched at the beginning of the First Plan is making satisfactory progress. The Scheme envisages a systematically planned method for the best utilization of superior germ - plasm obtained from improved stock by proper distribution throughout the country. The technique of artificial insemination is adopted so as to enable the utilization of the available limited number of approved bulls to the maximum extent.

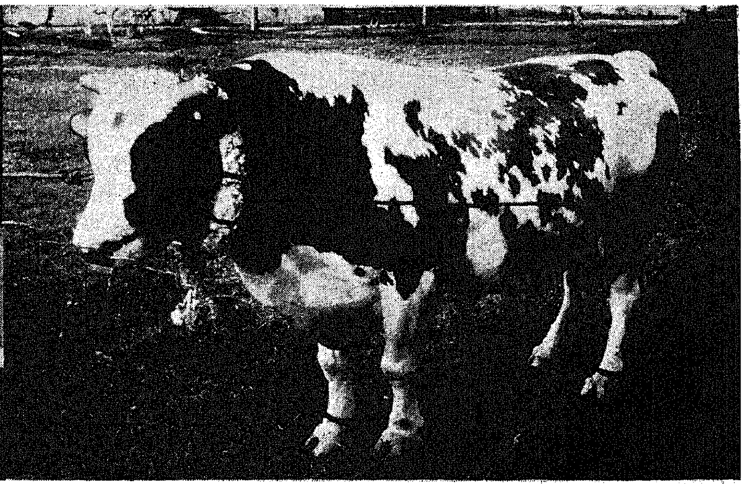
Contact with cultivator

Emphasis has, therefore, been laid on the necessity for close and constant contact with the cultivator who should increasingly realize that it is his own problem for which co-operation of voluntary efforts and general support from the public are of utmost importance. It is only by intimate contact and correct approach that the problems and difficulties of the cattle owners can be understood and their confidence gained. It is in this context that the celebration of Gosamvardhana day assumes great importance.



Sri W. R. S. Satthianadhan making his Presidential speech. In the background is seen Dr. D. Pattabhiraman, Director of Animal Husbandry.





GOSAMVARDHANA DAY IN MADRAS : Mr. Gopal Pillay of Bommalier Street, Madras, the proud owner of the stud bull which won the first prize at the Madras Cattle Show on 10th November 1956 receiving the prize from Srimathi Satthianadhan, wife of the Chief Secretary, Government of Madras.

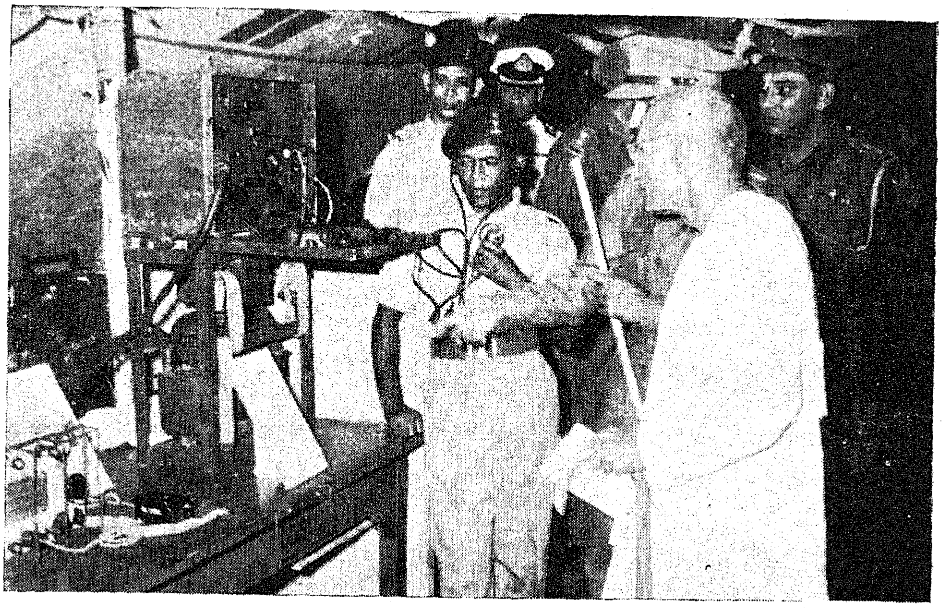
Swell the Ranks of the People's Army

Madras Finance Minister's Call to the Young Educated

"For a country of the size of India, it is neither possible nor prudent to maintain a large regular Army, especially as a huge military expenditure will be at the expense of national progress and development in other spheres", observed Sri C. Subramaniam, Minister of Finance, in a talk broadcast from Madras station of All-India Radio, on the eve of the Territorial Army Day. "The existence of a well-trained and efficient Territorial Army", the Minister added, "will enable us to keep the strength of the regular forces to the barest minimum possible."

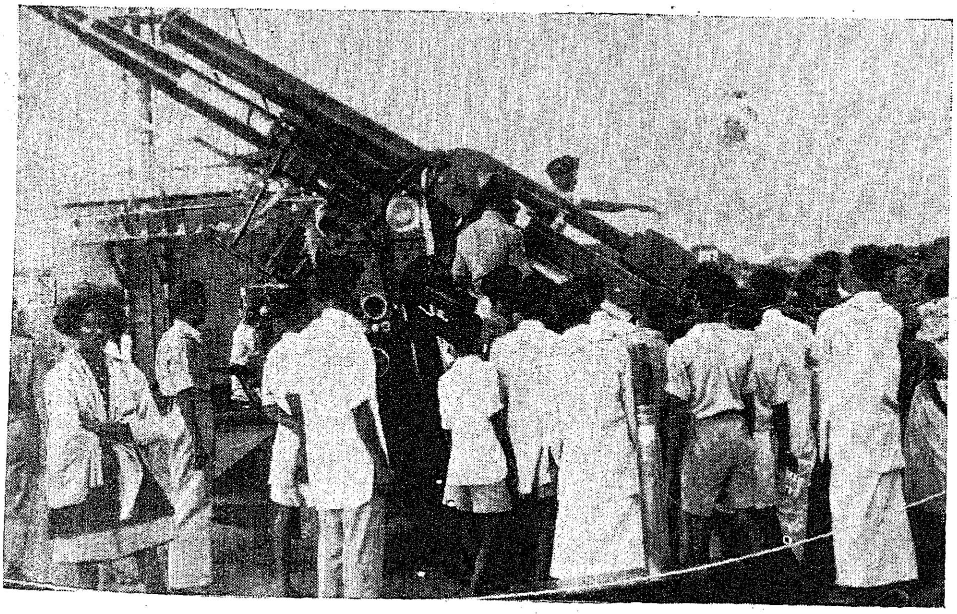
The following is the full text of Sri Subramaniam's speech :—

Today is the Seventh anniversary of the Territorial Army Day. The Territorial Army has an important role to play in India's defence. It is necessary that we should know something about this "Citizen Army" of ours.



Sri C. Rajagopalachari presided over the Madras T. A. Day celebrations and inspected the Exhibition on 17th November 1956.

As a nation, we are no doubt wedded to peace and our policy is one of friendship and goodwill to all nations. Nevertheless, in the present world situation, we must always be prepared to defend our hearths and homes in any emergency. The defence of a country is no longer the exclusive concern of the Government or even the Armed Forces of the country. In modern warfare, fighting is not confined to the Armed Forces alone. It becomes an all-out-war wherein the entire people are involved and all citizens will have to face the various perils involved in a modern war. It is therefore necessary that every Indian should be prepared to do his bit in the defence of India when the occasion arises. In this context, it has become an unavoidable necessity that we should build, as soon as possible, an adequate man power reserve of trained personnel who in times of peace would carry on their normal avocations, but during an emergency, be available for the defence of the nation. The Territorial Army in our country is intended to be such a reserve.



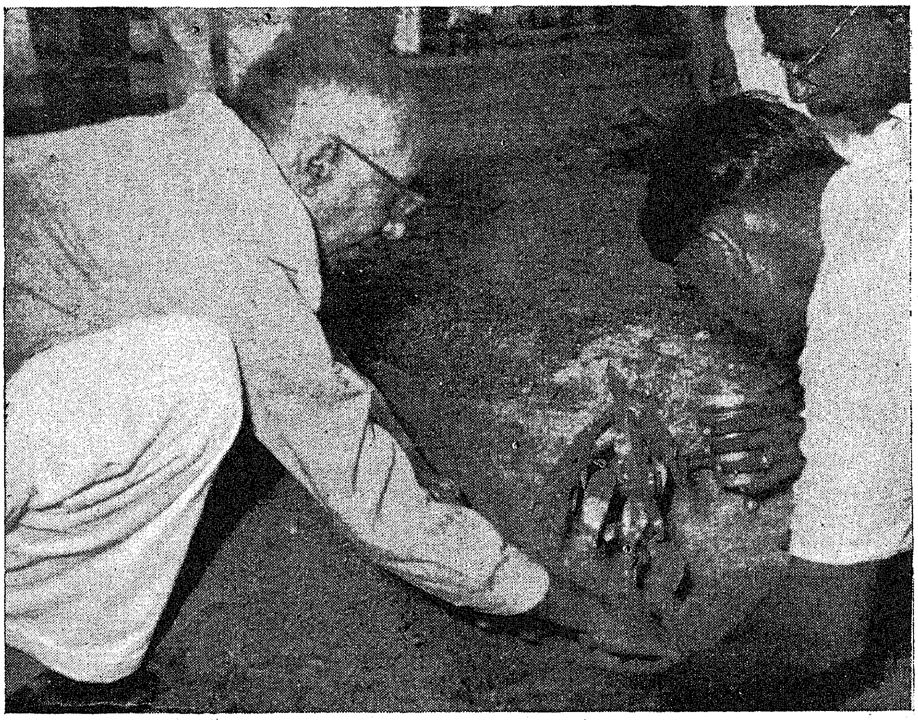
The Territorial Army Exhibition attracted awed attention of the young and old.

Under this scheme, military training is given to those citizens who are eligible and are desirous of getting it.

(*Continued on page* 7)

Police Take to Village Development in Madras

The disciplined ranks of the Police were harnessed to the needs of village development in Madras. On 15th November last, Sri W. R. S. Satthianadhan, Chief Secretary, Government of Madras, inaugurated the Village Development Scheme of the City Police, put into operation at Kattupakkam, a snug little hamlet 12 miles from Madras.



Sri W. R. S. Satthianadhan planting a sampling at Kattuppakkam on 15th November 1956.

Under the scheme, 25 Policemen and 25 able-bodied men from the Care-taker Home will be deputed daily to work on much needed improvements in the village with the co-operation of the people and under the direction of the Community Development Officials. With characteristic thoroughness, the Police took photographs of the village as it is, and accepted the the challenge of revitalising the village after the torpor of centuries. Photographs will be taken again after six months to show the improvement by contrast. This was an agreeable surprise to Sri Satthianadhan, who is also the State's Development Commissioner, and he appealed for a spirit of competition and rivalry among the various agencies now engaged in village uplift work, so that the pace of progress in this direction could be accelerated.

(*Continued from page* 6)

For a country of the size of India, it is neither possible nor prudent to maintain a large regular Army, especially as a huge military expenditure will be at the expense of national progress and development in other vital spheres. The existence of a well trained and efficient Territorial Army will enable us to keep the strength of the regular forces to the barest minimum possible. In this way the Territorial Army helps to keep down our defence expenditure making available resources for the economic development of the country.

Those who join this force are not likely to be called up for military service except in times of emergency. I am saying this to reassure all prospective candidates that enrolment in this force will not interfere with their normal civil avocations.

It has given me very great pleasure to see the good response in the recruitment to the Territorial Army in the last few months. It is heartening to find that both in the rural and the urban units we have reached nearly 95 per cent of our targets in other rank strength. It is necessary, however, to keep up this enthusiasm. But I am sorry to note that the response to fill in the Officer and the J.C.O. Cadre has not been quite good. I need hardly impress upon every young educated citizen that it is his duty to volunteer for the Officer and Junior Commissioned Officer's ranks so that it would be possible to keep up the strength of the Territorial Army.

The Auxiliary Territorial Force has been renamed as Lok Sahayak Sena. Five lakh men will get elementary military training under its auspices at the rate of one lakh per year. The training camps are located throughout India. This scheme has already started and is making satisfactory progress.

Here, then, is an opportunity for you to serve the country. The training you receive will fit you better for your various pursuits in life and will enable you to shoulder resposibilities in whatever sphere they may lie, more efficiently and with greater vigour. The Territorial Army is the people's Army, in the true sense of the word and is the citizen's own force. It is up to you, therefore, to swell its ranks and have the privilege of belonging to it and the country would be justly proud of you.

Jai Hind

—*By Courtesy, A.I.R., Madras.*

Prospects of Aluminium Industry at Salem

The development of heavy industries in the Madras State has so far been negligible and the Government consider that at least a few heavy industries should be started in this State during the Second Five-Year Plan period in addition to the exploitation of the Neiveli lignite deposits which has been undertaken by the Centre. A heavy industry for which there are special facilities in this State is the Aluminium industry. In this connection it is of interest to note that the production of Aluminium from Shevroy bauxite deposits in the Salem district has been recommended by Government. The bauxite is said to be of a very high quality and large blocks of power could be made available when the various new electricity schemes included in the plan are completed. In fact, the programme of expansion of electricity department takes into account the power requirements of the Aluminimum Plant and other industries both in the public and private sectors.

The Expert Committee set up by the Union Government to advise on the Aluminimum Industry inspected the Bauxite areas in Salem and the Mettur Power Project on the 21st and 22nd March 1956. It is understood that they are generally satisfied with the occurrence of Bauxite in the area. While exploring the scope for the setting up of a 10,000-ton aluminium smelter in the vicinity of Salem-Mettur, based on the bauxite resources of the Shevroy Hills, the Government of India had invited a team of experts from a well-known American firm for inspecting this and other sites in the vicinity of Rihand for the setting up of one or two smelters as soon as possible. On the basis of power supply which Madras Government have promised to make available by 1958, the Government of India expect to be able to set up the first unit in the Salem-Mettur area by 1959 at the latest. The experts who visited the Shevroys recently are desirous of having representative samples of bauxite from this area sent to them immediately. Although several million tons of bauxite-gibsite are said to be available in Shevroy area distributed over five or six hills, the quantity actually being mined is only a few thousand tons a year Both the Geological Survey of India and one or two companies have done a certain amount of exploration. Some analysis of the bauxite available has also been furnished to us by various agencies. These resources have been classified into various grades such as :

Over 50/52 per cent alumina ;

between 48/50 per cent alumina ;

below 48 per cent alumina.

While the grade above 50/52 per cent would certainly be most useful from the point of view of economy in capital investment and cost of production, from the stand point of making the resources of the area last as long as possible not only for a 10,000 ton unit to be set up immediately but also providing scope for its expansion to a 20,000-ton unit as soon as practicable it is necessary to know the quantities, of these different grades which might be harnessed. Once this information is available, it should be possible to work out suitable blends and base a plant on such blends so as to get the best out of the mines. In this context, therefore, considerable amount of detailed drilling operations is necessary and based on the results of such drilling suitable mining operations can be evolved.

In the meanwhile, however, it is necessary to get representative samples of each of these grades taken out and despatched to U.S.A. The entire economies of the scheme as well as preliminary designs of equipment would depend on the truly representative nature of the samples and their analysis. Intensive drilling operations have already been started by the Department of Industries and Commerce for taking out core samples of bauxite in the Shevroy Hills, which will be sent to America for tests.

Sri K. Kamaraj declared open the V.O.C. Building put up by a Youth Association of Vyasarpadi, near Madras.

India manufactured 4,182 diesel commercial vehicles during the first half of 1956.

Soil Conservation Scheme in Ketty Valley

Ketty valley, situated at an average elevation of about 6,400 feet above mean sea level, is one of the most exploited areas of Nilgiris district. It is shaped like a bowl with hillocks all around and the depression in the centre. The valley extends over an area of 13·5 square miles, i.e., nearly 8,640 acres of which about 5,000 acres are generally under cultivation with food and non-food crops.

The early settlers in the valley who migrated from the adjoining Mysore plateau had cleared the land of all forests and natural sholas, and broken open the land for cultivation purposes which was generally of the shifting type. This once fertile valley was since then continuously cleared of the natural vegetation, and the shifting cultivation, that was practised in the early days gave place later on to the cultivation of potato which is a cash crop in the Nilgiris. The improper land use and defective cultural practices for the farming on very steep slopes, growing potato—an erosion permitting row crop year after year in the same land and cultivating up and down the steep slopes, combined with the hilly topography of the area and the heavy rainfall the region receives, have been causing severe erosion of the rich top soil and heavy loss of the available plant nutrients from the cultivated fields. The mechanical loss of the soil caused by erosion could be clearly seen from the silt laden muddy streams flowing in the valley and similarly the deterioration of the fertility of the soil could be assessed from the gradual reduction in the crop yield and the increased requirements of fertilisers needed for maintaining even this reduced yield in such severely eroded lands.

The soils encountered in the valley are clay, clay-loam and loam and are lateritic in origin, with gneissose rock or charnokite as the parent material. The soils have, on analysis, been found to be acidic in nature and deficient in plant nutrients. The area receives an annual rainfall of about 55 inches on an average, of which 26 inches fall on the bare fields left fallow, during the three months from October to December in the north-east monsoon period. This is the critical period when most of the soil erosion takes place in the area. The slopes of land range from 1 in 6 at bottom of the valley to 1 in and more towards the ridge.

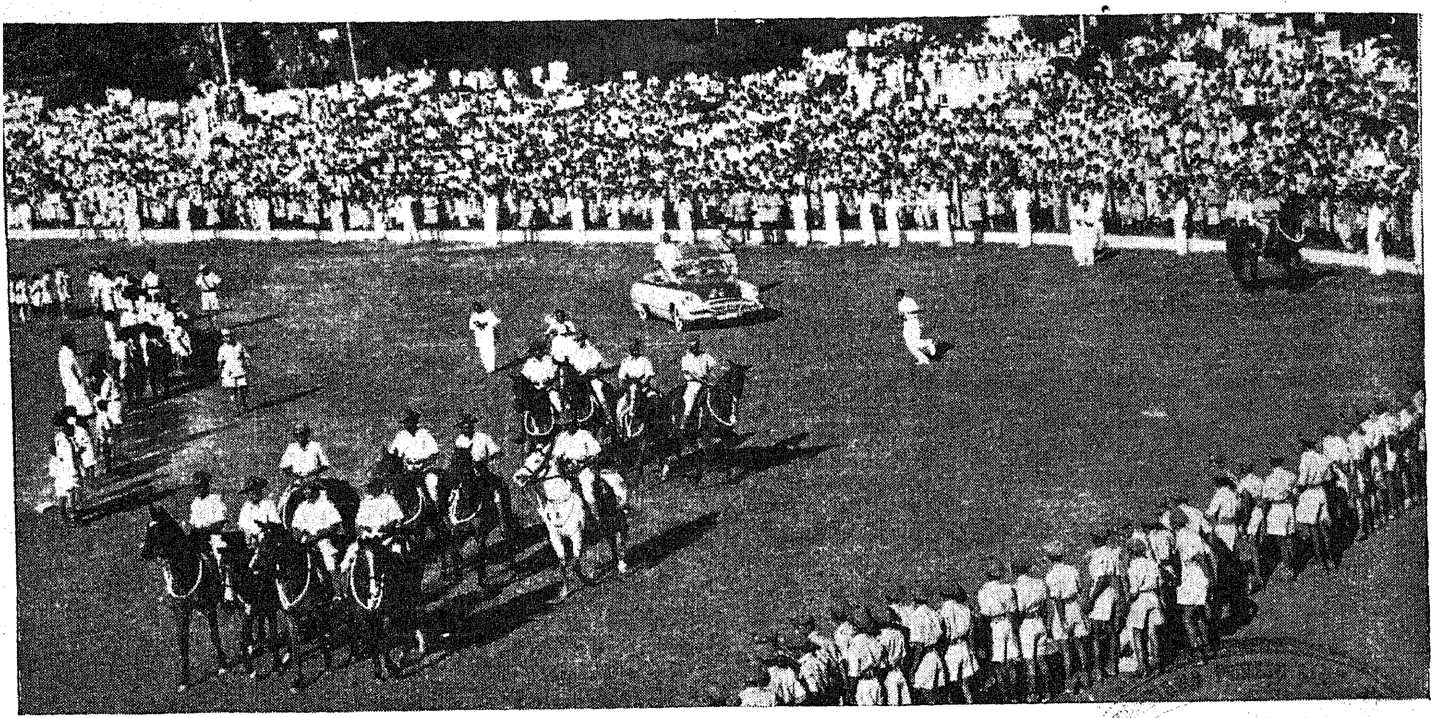
In order to prevent the erosion of the soil in these steep slopes and to improve and maintain its fertility status, the Agriculture Department of the Government of Madras has undertaken the execution of suitable soil conservation works over an area of about 500 acres in Ketty valley. In cultivable lands having slopes from 1 in 6 to 1 in 3 bench terracing with disposal drains and in prohibitive slopes steeper than 1 in 3, contour trenching and planting trees of economic value like blue gum and wattle are the measures adopted. The vertical intervals between the terraces are fixed with reference to the slope of the land and the depth of soil, so as to get an average working width of at least 10 feet that the ryots require for cultivating potato. As all the cultural operations are carried out in this part of the district only by manual labour, the average width of 10 feet of terraces provided are found to suit the ryots adequately. An inward fall of 1 foot and a longitudinal slope of 1 in 120 are given in the terraces, so as to collect the rain water falling on each of them, and drain it at a non-erosive velocity into safe outlets, excavated at intervals. The length of the terrace is also limited to 400 feet in order to avoid the water stagnating on the terrace for a long time, as the potato crop requires a quick drainage, for a study growth.

While exacavating the earth from the hill slopes for forming the bench terraces, the sub-soil in the area gets inevitably exposed. But it does not adversely affect the crop yield, as the soil is highly responsive to the heavy manuring which is applied for the potato crop.

These soil conservation measures, besides preventing the erosion of top soil and improving its fertility, have also contributed to some extent to prolong the useful life of the reservoir capacity of the hydro-electric and irrigation project of Lower Kattery Dam and the Lower Bhavani Project constructed lower down of which the Ketty valley forms a catchment. The beneficial results of the soil conservation works have proved by the increased yield of the potato crop obtained in the terraced fields, to the tune of 40 to 50 per cent over the adjoining unterraced fields, as found from crop-cutting experiments conducted by the Director of Statistics, Madras, and the reduced manurial bills to the beneficiaries. The ryots who are quick and intelligent to appreciate these benefits, have taken to the soil conservation works so very enthusiastically that the Government have extended these works over a large area of 5,000 acres with the ultimate object of covering all the cultivated lands of the Nilgiris district.

The works are done by the Government in the ryots' fields on scientific lines with specially trained officers in soil conservation practices. Manual labour and earth-moving agricultural machinery like tractor, bull-dozers are employed on the works. The entire cost of the works amounting to about Rs. 300 to 400 an acre is initially borne by the Government. Out of this 75 per cent is recoverable from the beneficiaries in fifteen or twenty easy annual instalments as fixed from time to time, the other 25 per cent being subsidised by Government. This expenditure that the ryot incurs for the permanent improvement to his field is recouped within two years by the increased yield from his land. The maintenance of the work is undertaken by the Government for a period of one year after completion and handed over to the owners of the land thereafter. Follow up agronomic practices, conducive to proper soil conservation practices and to ensure sustained yield from the terraced fields, viz., contour cultivation, crop rotation, green manuring, etc., are advocated by the Government.

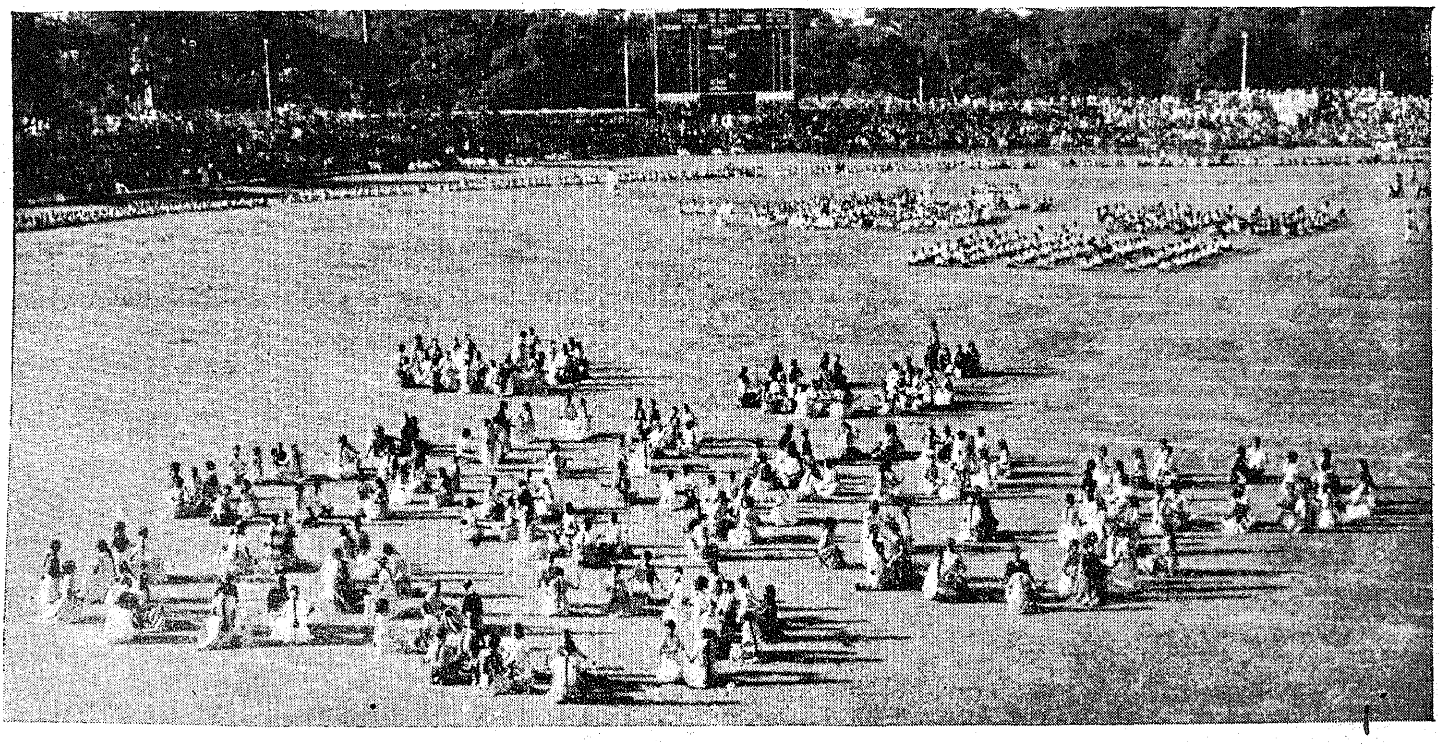
It is hoped that the importance of soil conservation measures will be realised by a greater number of farmers, especially by those belonging to the hilly regions like the Nilgiris where the erosion manace is acute and the present golden opportunity afforded by the Government to undertake suitable soil conservation measures on proper lines will be availed of by the owners of such lands in the best manner possible.

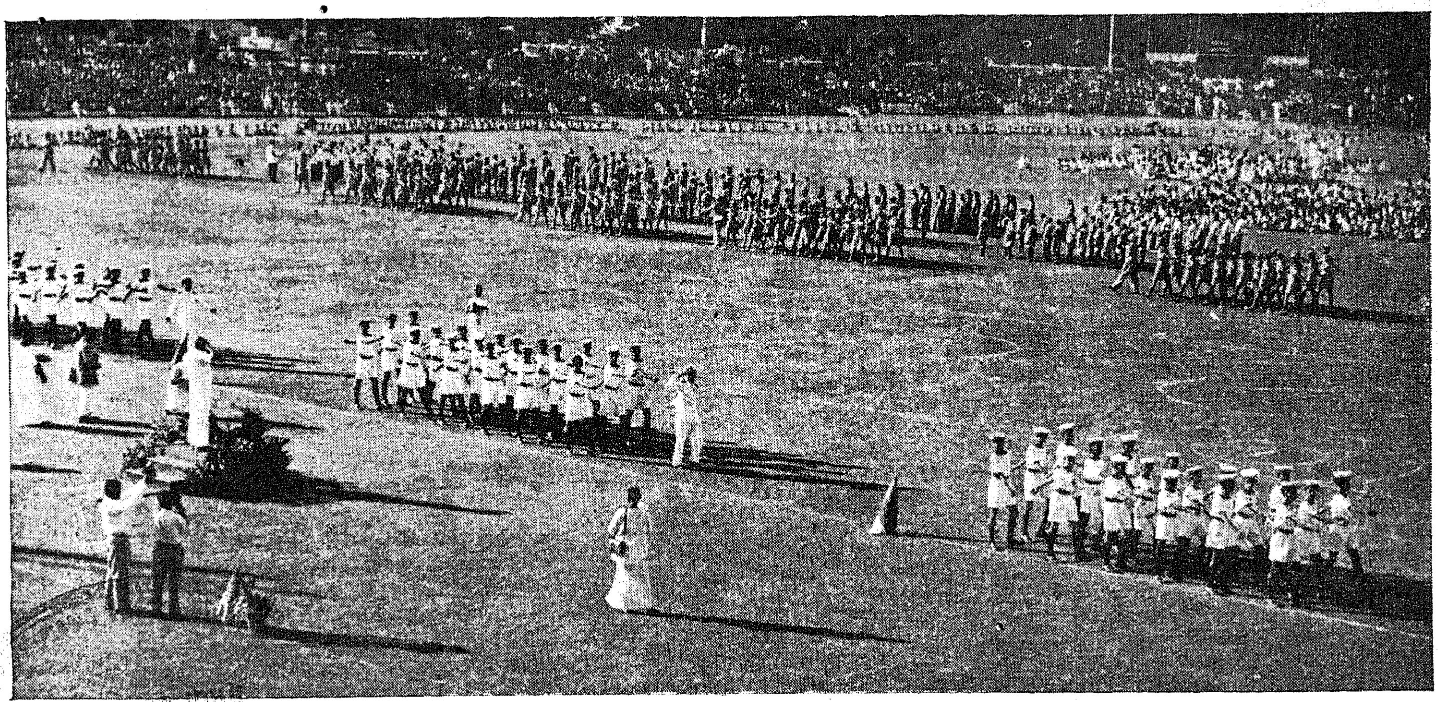


MADRAS CHILDREN GREET PANDIT NEHRU

8 - DEC 1956

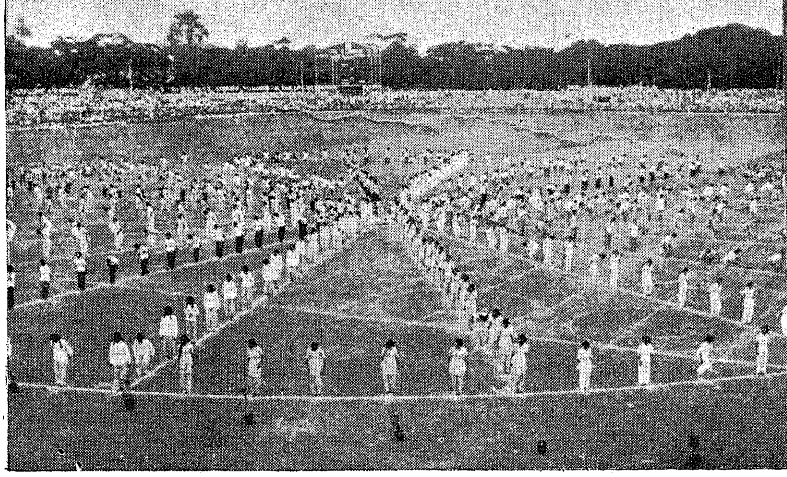
SPECTACULAR PARADE OF THE GROWING INDIA

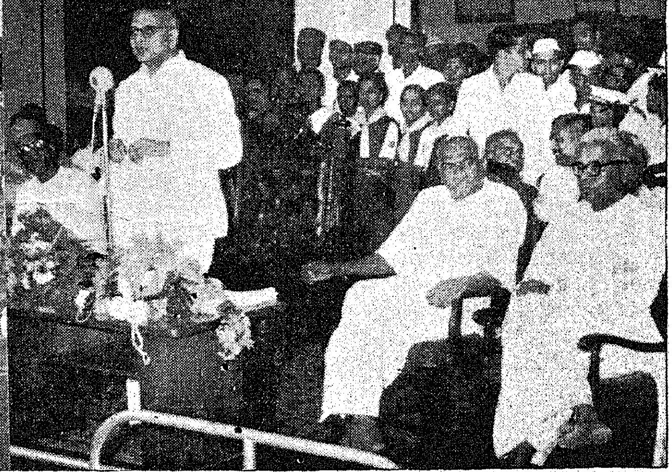




The All-India Children's Day on November 14, 1956, and succeeding days was celebrated in Madras with great eclat. Sri K. Kamaraj Nadar, Chief Minister, who took the salute at the impressive and colourful "March Past" of the School Cadets reminded them that they must send their greetings to Pandit Nehru.

Over 50,000 children in their smart uniforms gave a display of mass drills on the last day when Sri. T. T. Krishnamachari, Union Finance Minister, presided.





Co-operative Housing Schemes in Madras State

A Survey by Registrar of Co-operative Societies

"Housing is next in importance only to food and clothing. There can be no civilised life without proper housing facilities. Housing means provision of comfortable shelter with such surroundings and services as would keep the persons fit and cheerful. It includes the development of new buildings sites in well laid out areas and improvement of the existing localities with suitable arrangements for amenities like water-supply, drainage, roads, lighting, means of communication, medical relief, education, shoping, etc.," said Sri A. Palaniappa Mudaliar, Registrar of Co-operative Societies, Madras, in a talk from Madras Station of All-India Radio.

House Shortage

Sri Mudaliar further said: "The number of dwellings available is definitely smaller than the number of families requiring them. Though this feature was noticeable in urban areas even during pre-war times, the shortage of housing accommodation assumed the proportion of a major problem everywhere during the war period and subsequent years. There has been a steady migration of people from villages to towns and cities in search of more attractive livelihood and owing to the growing industrialization of the country. The rapid growth in population has outstripped all available housing accommodation and has caused overcrowding in towns. The increase in the number of houses has not kept pace with the increase of population. Apart from the increase in the number of Government offices with their attendant increase in the number of employees, their families and dependents, etc., there has been a marked increase of the professional classes like lawyers, teachers, doctors, the student population, etc., in urban areas. The uneconomic wage structure in the villages and the lure of town life with its attraction for better services in the matter of water-supply, medical relief, market facilities, better recreational activities like public parks, cinemas, theatres and hotels, keep back the people, who have already migrated to towns, from returning to their villages.

Agencies for House Construction

The normal agencies which can tackle the problem of house construction in urban and industrial areas are (i) the Government, (ii) municipal councils, (iii) private capitalists and (iv) employers. Employers can and do, on a limited scale, undertake housing schemes both in their own interest and in the interest of their employees. In big towns, where there is always demand for houses, both individuals and corporate bodies invest capital in the construction of houses and let them out on hire. But investment in houses is not so remunerative a proposition as investment in many other business and naturally less attention is given by private capitalists to this activity than to others which promise higher dividends. The municipal Councils are responsible for the health of their citizens and one of their duties is to improve housing; but with their limited resources and lack of staff they have not been able to tackle the problem on any large scale. Another agency is the Government and in fact, it is the Government that have undertaken to finance through co-operative housing societies the poorer and middle class people to construct houses in important places in the State.

Growth of Co-operative Housing

The pioneer attempt at organising a Co-operative Housing Society was made at Coimbatore as early as 1913–14 when the municipality cleared some congested areas and opened out extensions. Though the first co-operative building society was organised then, real progress in the activities of cooperative building societies began only from 1923 onwards when Government began to finance them direct. It was in that year that Government decided that financial help to building societies in the shape of loans was not only essential but also proper, representating a legitimate contribution by Government towards the solution of the building problem. When the problem became more acute after the war, Housing Committees were constituted by Government in 1947, in municipal and major panchayat areas with officials and non-officials as members for the selection of housing sites in centres where the scarcity of houses was acute. After the Committees had selected suitable sites for house construction, co-operative housing societies were organised in these centres. Many of these societies were based on the individual ownership system providing finance to their members leaving the construction to the members themselves, while a few put up colonies by constructing houses and making them over to their members on hire-purchase system. Some societies have recently been formed for purposes of constructing houses for being let out to their members, the ownership always resting with the societies. Such types of tenancy societies are required by educational and other institutions in order to provide accommodation for their staff.

Scheme for Low Income Group

There are at present four types of housing schemes, viz., the Urban Housing Scheme, the Rural Housing Scheme the Industrial Housing Scheme and the Low Income Group Housing Scheme, in operation in this State. The first two schemes are State-sponsored housing schemes, while the third and the fourth are schemes formulated by the Central Government for implementation through State Governments. Under the State Housing Scheme, the Government loans are made available to individuals through housing co-operatives up to four times their paid-up share capital subject to a maximum of Rs. 10,000 per house. The loan carries a reasonable rate of interest (the rate for the current year being 4½ per cent) and the loan is repayable in a period of

20 years, in instalments. Under the Low Income Group Housing Scheme, Government loans not exceeding 80 per cent of the cost of construction of the house inclusive of the site value, subject to a maximum of Rs. 8,000 per house are given to persons whose annual income does not exceed Rs. 6,000 per annum. These loans carry the same rate of interest as that charged by the State Government on loans made by them to societies. Persons desiring to avail themselves of the assistance provided under the Scheme should join a co-operative building society and apply for loans. The procedure in regard to the application and sanction of loans under the scheme is the same as that followed under the State Housing Scheme.

Industrial and Rural Housing Schemes

Under the Rural Housing Scheme, members of rural housing societies are eligible for loans up to four times their paid-up share capital as in the case of urban society and also up to seven times their paid-up share capital if they can offer agricultural land of value equal to the loan amount as collateral security subject to a maximum of Rs. 5,000 per house.

Under the Subsidised Housing Scheme of the Government of India for Industrial workers, when the workers form themselves into a co-operative society, the scheme provided that 25 per cent of the cost of construction including the value of the site is given as subsidy and 50 per cent of the cost as a loan provided the remaining 25 per cent is contributed by the workers concerned and provided the house conforms to the standard laid down by the Government of India in regard to the specifications, accommodation and the cost. The loan carries interest at the rate of 4¼ per cent and is repayable in a period of 25 years.

At present there are 200 urban housing societies, 103 rural housing societies and three industrial housing societies in the State. The urban housing societies implement besides the State Housing Scheme, the Low Income Group Housing Scheme of the Government of India. The industrial housing societies are meant to implement the Government of India Subsidised Industrial Housing Scheme. Housing is one of the major schemes in the Second Five-Year Plan of this Department. The Rural Housing Scheme is not one of the schemes included in the Second Five-Year Plan but it is still treated by the State as an indispensable scheme and the State Government are therefore continuing to provide necessary allotment for its implementation.

Funds for Repair and Maintenance

While there are a good number of housing societies provided finance for the construction of new houses, there are not many co-operative institutions for providing long-term funds to house owners for renewals, repairs, remodelling or redeeming their houses. There are only four house mortgage banks at Madras, Tanjore, Erode and Coimbatore. The maintenance of existing houses in a state of good repair is as important as the construction of new houses. It is therefore proposed to organise one House Mortgage Bank in every important town so that there may be such institutions functioning throughout the State. With a view to raise funds by the issue of debentures backed up by house mortgages and Government guarantee to finance these primary banks, proposals for the organisation of a Central House Mortgage Bank at State level are under the consideration of Government.

Plans for Paper Industry in Madras

Proposals from Private Sector Invited

India is at present far from being self-sufficient in paper, i.e., ordinary writing and printing paper. The present internal demand for paper is estimated at 240,000 tons per year and the indigenous production is of the order of 170,000 tons. The deficit is being met by imports. Having regard to the rapid rate of increase envisaged in the Second Five-Year Plan in industrial production, literacy, education and the general standard of living, the demand for paper and paper board is expected to reach the figure of 350,000 tons by 1960–61 and to provide for this, it is considered necessary to plan for an installed production capacity of about 450,000 tons. The existing paper mills and the new projects licensed already are expected to reach the figure of 422,000 tons by 1960–61. It is therefore necessary to bring into existence additional production capacity of about 28,000 tons to make the country self-sufficient in paper.

In our State there is not even one paper mill at present and our entire requirements of this essential article are met by imports from outside. This is all the more regrettable, because Madras State has got all facilities for the paper industry, viz., raw materials such as bamboo, timber, chemicals and power and water-supply in adequate measure. The Government of Madras have therefore been anxious that a few paper mills should be established in the State. With this end in view they have discussed the subject with the experts of the Government of India. Recently two teams of foreign paper experts, one German and the other Italian, inspected the facilities available for the development of the industry in this State. As a result of these investigations, it is considered that with the resources of bamboo, eucalyptus, wattle and other soft woods now available, it will be possible to set up two units for the production of ordinary writing and printing paper in the Nilgiris-Mettur area, one at Bhavanisagar and the other at Mettur, each with daily production capacity of 50/60 tons.

The paper industry has developed well in the private sector and the Government of India and the Planning Commission are both of the view that it should continue to be in the private sector. The Government therefore invite proposals from industrialists for starting paper mills at Bhavanisagar and Mettur Dam. They would be prepared to consider the question of granting all reasonable facilities to promoters. Financial assistance will be available from the Industrial Finance Corporation of India and the Industrial Credit and Investment Corporation. Applications for licence to establish paper mills, under the Industries (Development and Regulation) Act, 1951, should be made to the Government of India, Ministry of Commerce and Industry in the prescribed form.

Further information on the subject may be had from the Secretary to the Government of Madras, Industries, Labour and Co-operation Department, Fort St. George, Madras-9.

Rural and Urban Library Service

Pioneering Effort in Madras

By Sri T. PURUSHOTHAM, M.L.C.

It was rather unfortunate that in the recent debates in the Madras Legislature adverse comments were levelled against our library development programme. But, what are the facts? As in several spheres of developmental activity, Madras State has been a pioneer in establishing a comprehensive rural and urban library service and has indeed made remarkable progress in that direction. As early as 1948, the Madras Public Libraries Act was passed, the first of its kind in our country. It came into effect from 1st April 1950. The Act not only provides for the establishment of public libraries and the organisation of a State-wide library service, but also empowers the Local Library Authorities constituted under the Act to arrange for cultural advancement in all possible ways by means of study classes, lectures, exhibitions of art and science, and magic lantern and cinema shows, particularly suited to rural areas. An ambitious programme, no doubt, but well within the range of the practical as will presently be seen.

The Madras Public Libraries Act of 1948 as stated above came into force throughout the State from the 1st of April 1950. Under the provisions of this Act, the Director of Public Instruction was appointed the Director of Public Libraries; the Connemara Public Library, Madras, was recognised as the Central Library for the State and Local Library Authorities were constituted in all districts. As laid down in the Libraries Act, full library service is to be organised on the following basis: namely, a Main Library for every city with a population of more than 50,000; a Branch Library for every town with a population of 5,000 to 50,000; and a delivery station for each village with a population of 1,000 to 5,000. To achieve these objects, every Local Library Authority maintains a fund called the "Library Fund" from which all its expenses under the Act are met. The main and perhaps the only source of income for these library authorities is the Library Cess. Every Local Library Authority levies in its area a library cess in the form of a surcharge on the property-tax or house-tax levied in such area under the Madras City Municipal Act, 1919, the Madras District Municipalities Act, 1920, or the Madras Local Boards Act, 1920, as the case may be, at the rate of six pies for every whole rupee in the property-tax or house-tax so levied. This is supplemented by an equal contribution by Government.

In spite of limited finance, all round progress has been made in the spread of library service in the State by Local Library Authorities. Tentative schemes for the spread of library service and detailed schemes for the opening of branch libraries by the Local Library Authorities, were approved by the Director of Public Libraries. Seventy-eight branch libraries and 128 delivery stations were opened in the last two or three years. The library service under the Community Project areas and the Development Blocks in the State was co-ordinated with the library service of the Local Library Authorities in the areas concerned to provide for an integrated service. This is no mean record.

Public Response

The public response to these rural welfare activities needs special mention. The people actually view with each other in offering free buildings and other contributions for opening libraries in the villages. This has been most significant in Chingleput district. During the last three years, almost every town in the Chingleput district with a population of 5,000 and above has been provided with a library and today there are 18 such libraries at important centres. To each of these centres ten delivery stations (village libraries) are attached. Thus there are 180 village libraries, 100 of them being worked with the help of Elementary School teachers and the rest with the help of the Officers of the Community Project Administration and National Extension Scheme. This net work of libraries caters to the needs of urban and rural folk in this district. A scheme of integrated library service with the co-ordination of the Community Project department has been implemented and the Government have granted special grants to the tune of Rs. 10,000 for rural library service at Thirukalikundram and Rs. 5,000 for each of the libraries at Tiruvellore, Uthukottai, Kadambathur and Sriperumbudur. Thanks to the enthusiasm of the local people at Poonamallee, Kadambathur, Mangadu, Uthukottai and Sriperumbudur, rent-free buildings were placed at the disposal of the local authority for the branch libraries. Besides, with the help of Government under Local Development Works Scheme the Library Authority was able to take up construction of its own buildings at Madurantakam, Chingleput and Walajabad and ere long they will be ready for occupation.

Children's Library

An important service taken up in Chingleput district is the Children's Library at Chingleput which is really popular. It is pleasing to note that Srimathi Rajeswari Ammal, wife of Sri M. Vedachala Mudaliar, Municipal Chairman, Chingleput, has given a donation of Rs. 1,000 for this Children's Library. As early as August 1955 a scheme of Hospital Library Service was formulated, the stimulus coming from Shri Sri Prakasa, Governor of Madras, who presided over a special function of the Library at Poonamallee. On the eve of Mahatma Gandhi's Birthday and to mark the occasion Sri A. B. Shetty, then our Minister for Health, was kind enough to inaugurate the Hospital Library Service at Chingleput on the 1st October 1955. A year later on the 3rd of October this year, a similar scheme was started at Kancheepuram by Srimathi Maragatham Chandrasekaran, Union Deputy Minister for Health. In the course of her speech, she strongly applauded the idea of a library at the T.B. Sanatorium, Tambaram, and the Sanatorium Library was started by the Local Library Authority last

(*Continued on page* 15)

Social Welfare Services in Second Five-Year Plan

The social services and social welfare schemes formulated by the Planning Commission in theFirst and Second-Five Year Plans are based essentially on the Directive Principles of the Constituition and are intended to implement the provisions thereof. These principles impose on the State the obligation to undertake a series of measures for promoting the economic and social well-being of the people, said Shrimati Durgabai Deshmukh, Chairman of the Central Social Welfare Board, addressing the international Seminar of World Y.W.C.A.

Shrimati Durgabai Deshmukh said that the primary aim in providing for the social services and social welfare services was to invest the political freedom which India had attained with an economic and social content. Referring to the provisions made in the First and the Second Five-Year Plars for social services, which include Education, Public Health and Medical Relief, Housing Schemes, Labour Welfare, Community Development and so on, she said that they constitute about 20 to 21 per cent of the total outlay in theFirst as well as the SecondFive-Year Plans. Social services, however, are meant to serve the needs of all sections of the population whereas Social Welfare programmes as such are concerned with the provision of specialised services for certain specific groups, which have not received much attention so far. Among such groups are women and children in the rural areas and the handcapped and the delinquent sections. The establishment of the Central Social Welfare Board was intended primarily to ensure these services.

Rural and Urban Welfare Schemes

Shrimati Deshmukh explained the Scheme of Welfare Extension Projects and the programme of grants-in-aid to voluntary welfare institutions. In the former some basic services to women and children in regard to medical aid, promotion of public health in the rural areas, promotion of literacy and craft training are included. But not only are these basic services provided in the Project villages but a spirit of self-help and predilection to self-improvement are also evoked in the rural population. In illustration of the benefits derived form these activities, Shrimati Deshmukh cited her experiences during a recent visit to some Welfare Extension Projects in Punjab and Pepsu States. Women of theseProject villages gathered in large numbers to welcome her and told her how the literacy they had acquired had helped them in writing letters to and reading letters received from their relations without seeking the help of others.

As regards grants to voluntary Welfare institutions, they are intended to help such institutions to render services to women and children and to improve the services and also to stimulate continuous local effort for welfare activity. The condition that each institution receiving a grant from the Board should find a matching contribution to supplement the grant was an important factor in stimulating and sustaining this local effort.

A serious bottleneck

One of the serious bottlenecks in the promotion of welfare services, Shrimati Deshmukh said, was the absence of trained workers to carry on activities in the rural areas. This is the reason why the Central Social Welfare Board has decided to train about 25,000 persons as *gram sevikas*, craft assistants, *dais*, and midwives during the Second Five-Year Plan period for employment in the Welfare Extension Projects. Besides this, the Projects are also having the services of a few thousands of voluntary women workers as members of Project Committees or in other capacities.

Shrimati Deshmukh explained the scheme of Urban Family Welfare Projects, which provide gainful employment to and form a source of earning a supplementary income by women of lower income group families in urban areas by organizing them into industrial co-operatives, under which small-scale industries like matchmaking are carried on.

Shrimati Deshmukh paid a tribute to the vital role of voluntary social welfare workers—men and women—in rendering services to the weaker and down-trodden sections of the community in the rural as well as in the urban areas.

(*Continued from page* 14)

month. A special grant of Rs. 1,500 was made by the State Government for the Hospital Library Service. The Central Ministry of Health has given a grant of Rs. 5,000 for the purpose, testifying to the keen interest evinced by the Government in the spread of library service at various centres. The Ministry of Health, Government of India, have also been addressed by the Chingleput Local Library Authority for regular supply of Health Pamphlets, Posters and literature for working out a comprehensive scheme of rural health propaganda through the agency of the village libraries.

Latest Equipments

To achieve the many sided objects of the library movement, several facilities are available now. The Government have provided Publicity Vans in most of the districts and Field Officers have been appointed for rural propaganda work. These vans are fitted up with up-to-date projector equipment and regular propaganda of a greatly educative nature could be carried out by co-ordinated activity of these different departments, and the Government should consider how best an integrated scheme of the kind could be implemented.

Further expansion of rural library service is necessary but the financial resources of the Local Library Authorities are limited. The Planning Commission, it was understood, has considered the problem, but there is no specific provision in the Second Five-Year Plan. It is however hoped that out of the allotments under Social Services, it should be possible to get an appreciable slice for implementation of a more vigorous programme of library development in rural areas in all the States.

Trends in Contemporary Indian Painting

J. M. Keynes once described the tendency of the radical economists of today to make scathing reference to classical economics as "shying at a composite Aunt Sally of uncertain age". Some of our critics who have not yet begun to suspect that art has sociological basis show a similar passion for jousting with a mummy—the revivalist painting in Bengal. This upsurge was the reflection of the Swadeshi movement in the aesthetic plane and has historical parallels. While Ignatius Loyola was mobilising the forces of traditional faith and discipline against the turbulent energy of the Reformation, El Greco helped the Counter-Reformation by rediscovering the idiom of the early Christian painting of the Roman catacombs. Similarly, the renaissance painters created a synthetic art from Ajantan, Moghul and Rajput elements to reaffirm their faith in the vitality of values native to the soil, in the face of currosive onslaught of the West. That context is thing of the past and in discussing the art of the revival we might cultivate the historic sense needed for the study of all period art.

What interests us today is the prolongation of the renaissance idiom. Divested of its morbidity which had often led to unpleasant exaggerations of style, the renaissance manner survives today, content to evolve purely decorative effects and managing that splendidly in the works of the host of artists. Two legacies have been left by renaissance painting which are of great value to contemporary decorative art: the melodic beauty of the line and the appeal of the delicately blended tonalities.

The revivalists had salvaged the aristocratic traditions of the past. There was another—a rich and vital folk tradition—which had to await the advent of Jamini Roy. Today the nation accepts not only its princes and emperors but also its poor relations. Motifs of folk art have the great virtues of simplicity, refreshing colour, direct emotional impact. Roy enriched this inheritance by taking over the classical purity of line of "Picasso's "Greek" period, reinforced often by the use of a single colour and in many other fascinating ways. His vigorous, coherent statement of form mediates today between the younger artists and the folk art tradition to which they turn for inspiration. At least one artist—Biswanath Mukerji—has developed a new power in the folk idiom: a monumental weightiness of utterance.

KRISHNA CHAITANYA

An aristocratic tradition is an exclusive tradition and that is why the revivalists rejected suggestions from the West, though promoted by the antithesis of the East and the conquering West, they patiently studied the colour technic of Japan and China. The popular tradition, on the other hand, is less consciously exclusive. It is this latter attitude that has come to stay, especially after the attaining of Independence. There is an element of frustration in the backwash of all revolutions. And that could be good at times, as for instance when it leads to a more objective appraisal of the qualities of other nations. Though artists and critics both frequently get themselves tied up into knots in controversies over borrowing suggestions, the younger artists have quietly gone ahead, hunting up affinities, tripping up badly on occasions, but on the whole succeeding remarkably well in assimilating various influences and producing a modernistic art. The far flung nature of this network of stimuli will need a lot of space for a full analysis. The vigour and directness of the stoneage paintings of Altamira, the stylised treatment of anatomy in Egyptian frescoes, the sombre, heavy impact of Aztec images, the brooding intensity of early Coptic art, the magnificent breadth of vision of Sung landscapes, the subdued but profound lyricism of Hiroshige, the narrative and episodic treatment of Tibetan banner paintings and the subconcious symbolism of Negro art—all these influences, far flung in their sources in time and space, have played on modern Indian art.

The difference between academism and radicalism is not the same thing as the difference between stodginess and brilliance. Academism ends up in stodginess only when the solid workmanship, which is its first preference, is not backed up by inspiration. When it has that backing, it comes to incarnate myriad, ageless beauties. Conversely, when a flame-like intensity of inspiration is lacking in radical attempts, their structural weakness and sightness of total impact begin to show up. Anyway, the present neurotic age has no time for patient construction. So we find the various elements of classical architectonics dissolving and being independently pursued. The impact of the West emancipated the landscape which was a mere backdrop to the play of tender human sentiments in the *Nayika* and *Radhakrishna* paintings of the Rajput schools, but it is rarely that one sees ambitious constructions which can equal a Constable or a Poussin. Many artists seem to prefer narrative fluency to compositional weightiness, inspite of the frequent risk of sketchiness.

Rhythm is another minor deity who has broken loose from the general pantheon and has started demanding adoration on her own rights. In Sudhir Khastigir it expands into distended patterns, which reflect, for examples, the climax of ecstasy in dancing figures. Slower and more controlled in its undulations, the line in Hebbar conserves volumes deliberately planned to fit in with each other as an example. Hugging the enclosed volumes loosely, ungainly at first sight and attractive at second the line in Rathin Maitra gains beauty by patterned repetition. Architectural in its rigour, it gives an enduring stability to the represented forms in Premoja Chaudhuri, which are won back to warmth by a keen appetite for colour. Brittle and staccato, it develops an explosive nervous energy in Gopal Ghose. And so—as we may judiciously put it—on.

Expressionism has not found great favour with Indian painters, though Rabindranath Tagore was a great pioneer in the field. But we have at

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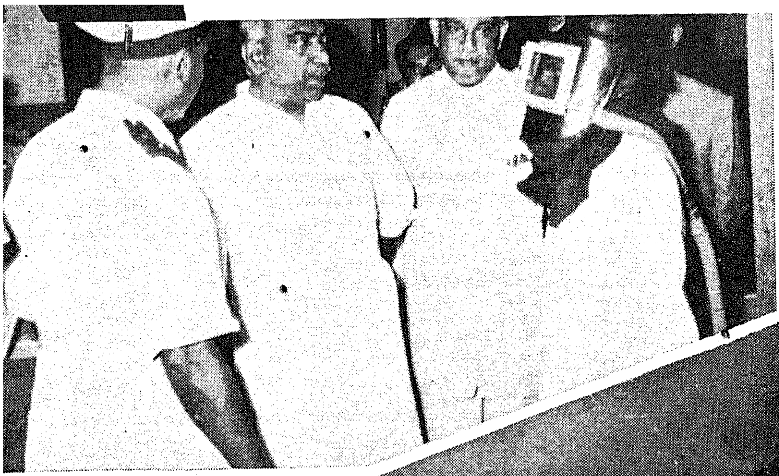
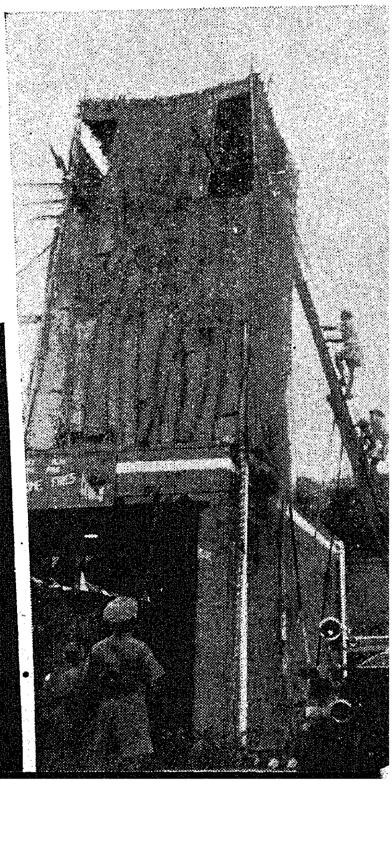
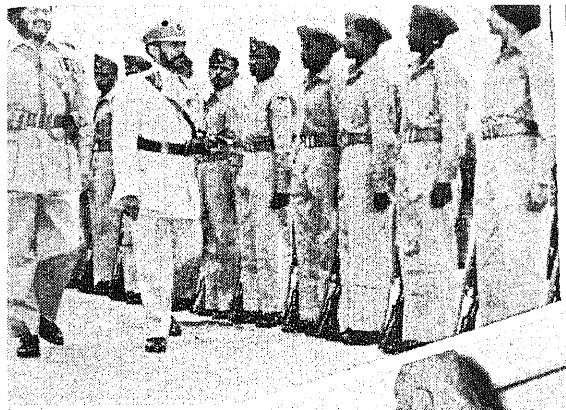
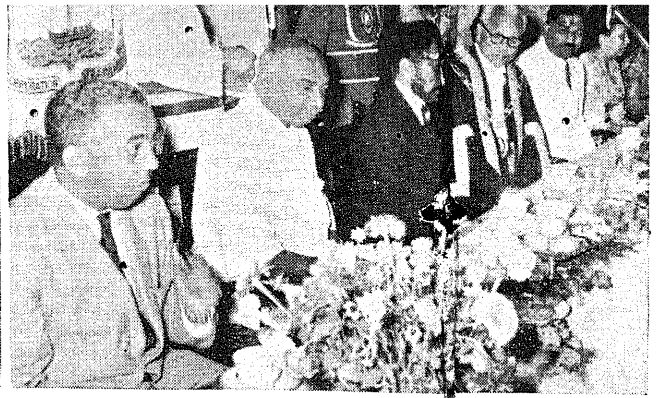


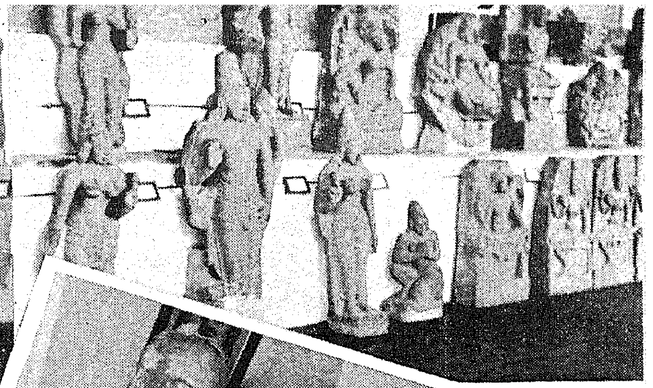
FIRE PREVENTION WEEK

' All through the Deepavali W the M.F.S. carried out demonstrati to propagate the simple rules of F Prevention. Photos show them battl with a "fire".



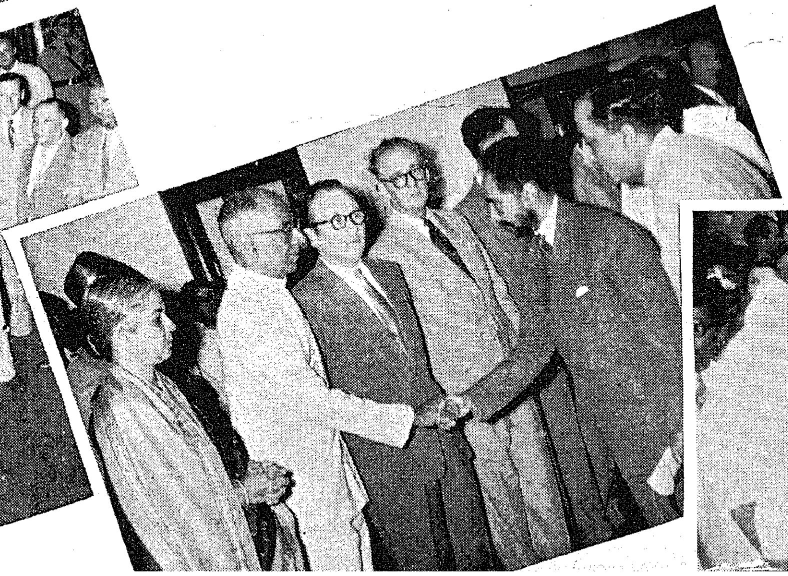


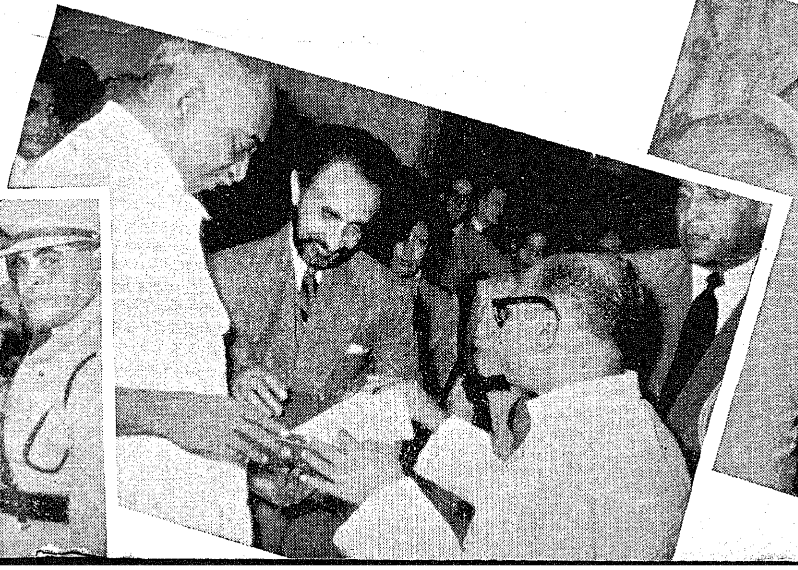
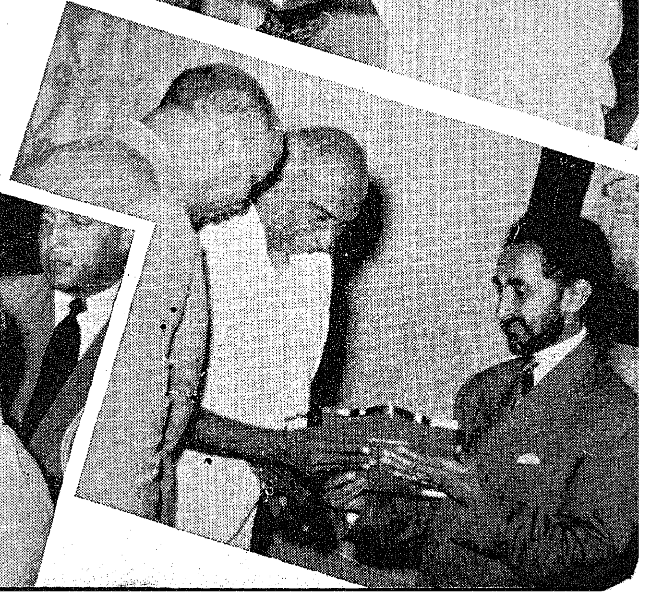




GLIMPSES OF AN IMPERIAL VISIT

The Emperor of Ethiopia walked through our Museum, talked with our leaders and smiled with the children, to discover Madras in all its facets, and leave behind him happy memories of a Great Monarch.



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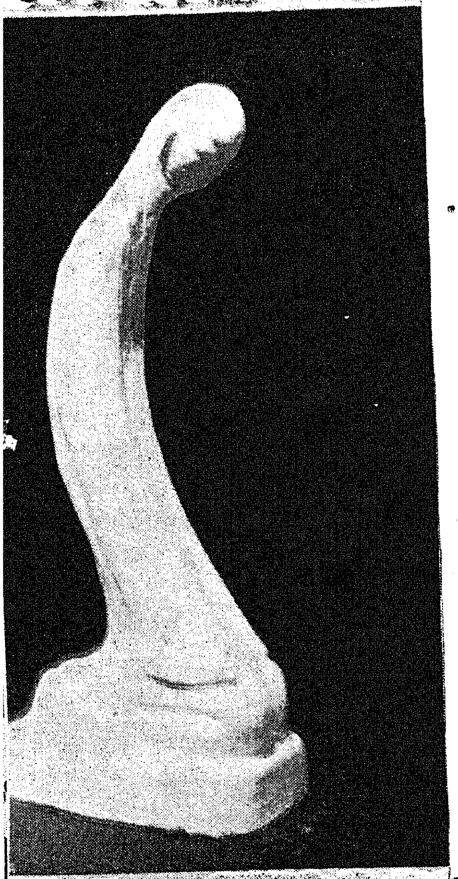

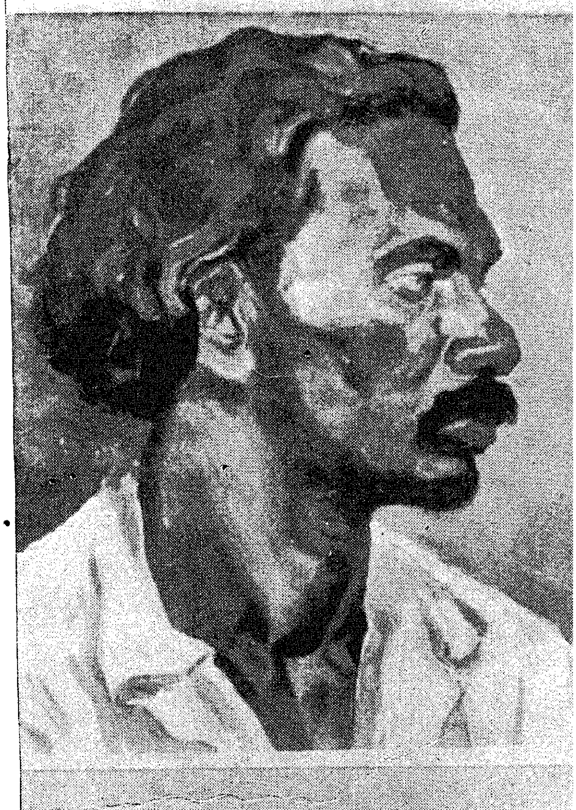

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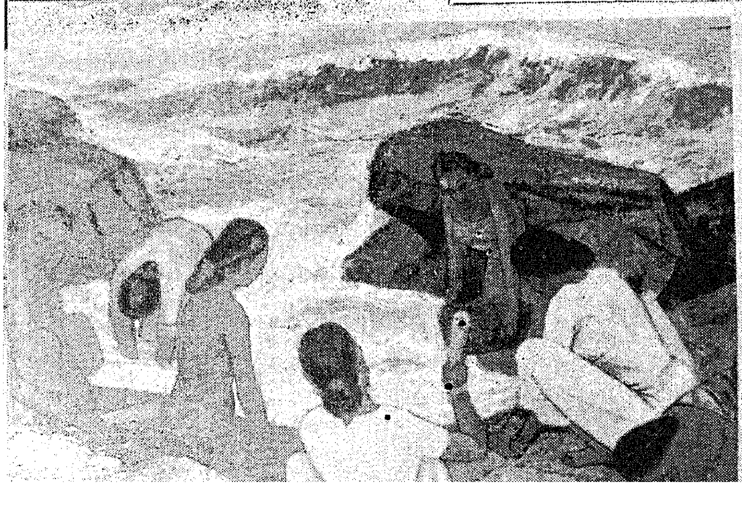
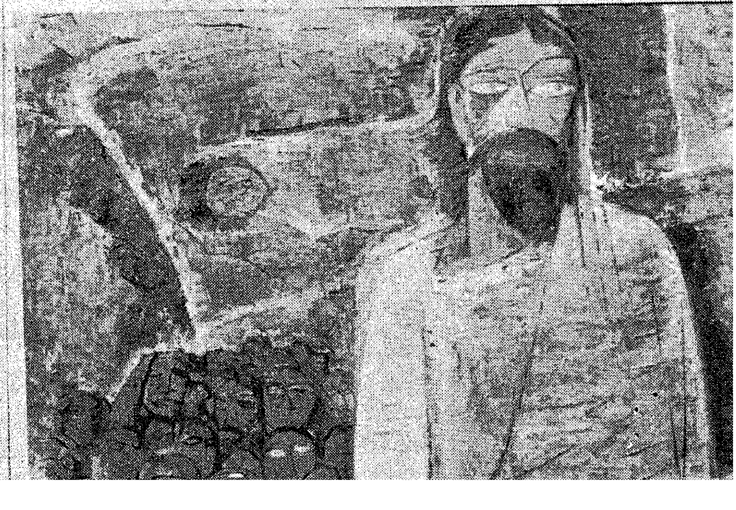




National Values in Art

By K. N. RAMACHANDRAN.

The regenerating and revivifying influence of political freedom on all aspects of national life has exerted its influence on artistic and cultural fields also. The sense of freedom has brought with it new-born sense of self-respect and confidence and pride in national tradition and a thirst to integrate these with contemporary needs and value. Under the active patronage of the Government and the Public, along with other fine arts, the art of painting, drawing and sculpture too has taken tremendous strides forward. The deadening influence of foreign domination used to press with exceptional heaviness on graphic and plastic arts. Western values propagated through countless books and periodicals nearly extinguished indigenous art. As an intolerable uprising against this came the revivalist movement which originated in Bengal. But it was unbalanced seeing that it sought to revive *in toto* traditional Indian art without reference to the realities of contemporary life. This extremist approach was the natural outcome of a violent reaction against intolerable oppression. But now that real freedom has dawned the need for such radical stand is no longer felt and hence we find that there is a tendency among Indian artists in general to accept the best of what the rest of the world can offer and integrate it with his own national tradition and demands of contemporary life.

Madras the acknowledged home Indian art and culture has not lagged behind in the artistic upsurge evident throughout the country. Some ten years back art exhibitions used to be few and far between and public patronage in the fullest sense of the term was nil. But now it is very usual for the city to have at least a dozen exhibitions a year and the regular stream of visitors drawn from all ranks and walks of life to such exhibitions is a sure index of the popular realisation that art is vital for a fuller and more significant life.

The exhibition organised by the Progressive Painters Association recently is an important annual feature helping to attract as it does almost all the South Indian Artists to exhibit their works before an art-loving public whose numbers are steadily increasing.

The first impression one gets is the lack of uniformity in the standard of exhibits, good, bad and indifferent works are on view. This is the result of the endeavour on the part of the organizers to give maximum possible representation to artists (ninety-two artists were represented) this being the only exhibition where all artists including art students get a chance to exhibit their works. In spite of this the overall effect is quite pleasing. A catholicity of oultook which embraces the art influences of the world is plainly evident. The works of the leading artists reveal a conscious effort to incorporate these influences into national art tradition. The problem seems to be the harmonious fusion of oriental and occidental values through the essential requisite of individuality of expression. The influence of impressionist, cubist and abstraction are visible in many of the exhibits. Yet by and large the artists have made conscious efforts with varying degrees of success to make their personal statements.

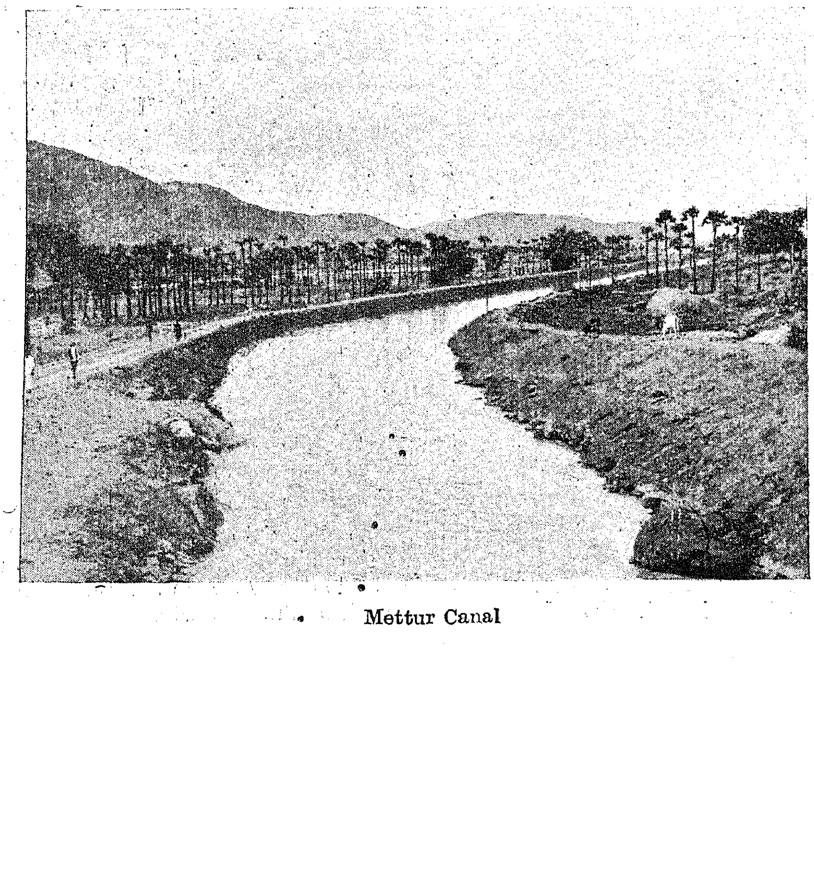
A few of the artists deserve special mention. K.C.S. Panikar takes credit for some of the most outstanding works on view. The centre piece of the Exhibition is a big mural depicting the life of the Buddha. The picture is executed in flats. The figures with their enlarged heads and big expressive eyes executed in mild relief have a character which is both traditional and distinctly personal. One form merges into another giving the picture wonderful unity and an impression of gentle rythmic swaying. The colouring is superb and helps to lend an air of purity and graciousness so well suited to the theme. His sketches in blue have an epigramatic brilliance behind which may be observed individuality and a capacity to incorporate world art influences with knowledge and taste. Sri K. Srinivasulu has contributed some outstanding works in thempera medium. The 'Red Bull' and 'Kathakali' are striking efforts in the traditional Indian style made significant and effective by the artist's own contribution to it. Mr. Dhanapal has confined himself to sculptures only. His 'Mother and Child' is an excellent piece in plaster and his 'Portrait' in clay is high lighted by studied simplicity of form. He has in addition put up a fine portrait study of Nehru. 'Festival' by H. V. Ramgopal is a very good work. His 'eternity' is effective and thought-provoking. His sculpture piece 'Vinobhaji' is forceful and convincing. Mr. Krishna Rao has contributed works both in oils and water colour. 'Composition' by him is noteworthy in the former medium while his water colours display ease and fludity of treatment. Mr. Anthony Das deserves praise for his 'The Sacred Hour', depicting Christ, the Man of Sorrows. Both the strong design and haunting colours make the picture a good example of strong emotion, wedded to fine technical sense. His Mamallapuram studies are also excellent. Mr. P. K. Prabhakar's forte is design. His picture 'Muslim Tailor' is a good work in which he has analysed in terms of bread design and vigorous colours, the essential character of his subject. His landscape 'Culvert' is another good work. 'Peace' by A. P. Santhanraj in the modern western idiom is quite interesting. Mr. T. R. P. Mookiah's 'Landscape' deserves special mention. Mr. Murugesh in his 'Boy' reveals a characteristics simplicity and directness of approach. The picture is expressive and very personal. Mr. Munusamy is concerned with modern abstraction and his works in their way are effective; the artist, it is evident, is struggling to convey a personal message through the well explored values of abstract art. Mr. Reddappa Naidu, a new comer to the field, has some good works to his credit. His palette knife treatment is interesting and his works reveal ease and dash. He has succeeded in dramatising common incidents in everyday life. "Day Dance" by Varadarajan is a competent and pleasing effort. "Movements in Crayon" by Jagannathan reveals good technical ability. There are also some charcoal sketches, those of T. Krishna Rao and Narayanan being particularly interesting. The commercial design section is well represented, the textile pieces by V. Surendran, Krishna Kumari and M. Pakkiri being attractive in design and craftsmanship.

The Exhibition was attracting a large number of visitors. The Madras public is evidently very much alive to this branch of the fine arts.

The Life-Line of Madras—Cauvery.

By SRI U. ANANDA RAO, *Chief Engineer, Irrigation.*

The Cauvery, one of the sacred rivers in South India, rises at an elevation of 4,400 feet above M.S.L. on the Eastern slopes of the Western Ghats in Coorg. After running through Coorg territory for about 60 miles it flows for quite a long distance over the Mysore plateau. Mysore Government have built a dam and formed a reservoir called Krishnaraja Sagara near Mysore. Above this reservoir two tributaries, one the Hemavathi, which has more or less an equivalent catchment like the Cauvery, and the other, the Lakshmanathirtha, a small tributary, join the Cauvery. Below the Krishnaraja Sagara, the river has a meandering course with several anicuts across it irrigating small areas on either side. About 30 miles below the Krishnaraja Sagara, a tributary called the Kabini joins the Cauvery on the right. Up to about 50 miles below Krishnaraja Sagara, the Cauvery lies entirely in Mysore State, after which the river enters the Kollegal taluk. From this point the river is the boundary limit between Madras and Mysore up to 88 miles from Krishnaraja Sagara. (Under States Reorganization, the Kollegal taluk which adjoins the Cauvery river has been transferred to Mysore State.) About 11 miles below Kollegal, is Sivasamudram where the Cauvery falls by about 330 feet and power is developed by Mysore. About 6 miles below Sivasamudram the Simsha joins the Cauvery on the left. Further 16 miles lower down Arkavathi also joins the Cauvery on the left. Below Sivasamudram the river runs in a deep ravine between high mountains up to Hogenakal falls, the starting point of the Mettur Reservoir water-spread. The river is very narrow in this reach and at a particular point, that is about 88 miles from Krishnaraja Sagara the river is said to be so narrow that even a goat can leap from one bank to the other. This place is called Mekadatu, the Kanarase equivalent for 'goat leap'. At this point the Mysore Government has a proposal for developing power. Below this point the river runs entirely in Madras State. About 35 miles below the Hogenakal falls, the great Mettur Dam was built across Cauvery between the years 1925 and 1934. The dam is a fine beautiful structure about a mile long with a height of about 214 feet above the deepest river bed. This reservoir serves both irrigation and power. Leaving Mettur Reservoir, the Cauvery is joined by the Bhavani, the largest tributary draining the Southern slopes of the Nilgiris hills about 25 miles lower down. Thirty miles below, the Noyyil, another tributary enters the Cauvery. Twenty-two miles further down, the Amaravathi which starts from the Anamalai hills of Travancore State empties into Cauvery.



Mettur Canal

The Aganda Cauvery

At about 30 miles below the infall of Amaravathi, the river reaches its maximum width at a place called Aganda Cauvery at the head of the Srirangam Island. At this, point, the river divides into two branches, the right arm called the Cauvery and the left arm called Coleroon, the latter being mainly a flood carrier. At this site an anicut was built by Sir Arthur Cotton in 1836 to divert low flows into the Cauvery and to pass down flood discharges which are not required for irrigation under the Cauvery. This is called the Upper Anicut. This was converted into a barrage later. Twenty-six miles below this anicut, is the Grand Anicut where the Cauvery Delta system commences. At this point, a portion of the flood waters of the Cauvery and also the irrigation requirements for Coleroon are passed into the Coleroon through the Grand Anicut. Here the Cauvery divides itself into three branches, the Cauvery, the Vennar and the Grand Anicut Canal benefiting the fertile tracts of the Tanjore district which is known as the 'granary' of South India. The Cauvery below the Grand Anicut divides itself into a number of branches so that the main river becomes very insignificant by the time it empties into the Bay of Bengal at a place called Cauverypatnam. Actually, they become canals and channels to carry water for irrigation in the delta.

The Coleroon, which is the flood carrier empties in the sea on the northernmost limit of Tanjore district. In the year 1836 an anicut was built across this river at a point about 70 miles below the Grant Anicut, in order to ensure supplies to the ayacut under the river. This was later on converted into a regulator and known now as a Lower Anicut.

The Cauvery river is 500 miles long and drains about 31,000 square miles down to the sea of which 14,200 square miles lie in Mysore State. The Western Ghats are subject to heavy rainfall during July and August. The Mysore plateau gets rains more or less from both the monsoons but below the Mettur Dam, the catchment receives more of North-East monsoon and very little of the South-West. High floods usually occur in the river in July and in November, the highest recorded flood of 26th July 1924 giving a peak flow of 456,000 cusecs at Upper Anicut.

Early irrigation

Irrigation in the Cauvery delta dates from time immemorial. Many old works still extant show that irrigation received considerable attention at the hands of the old Pandya Rulers. The system was, however, more an inundation system than a controlled irrigation system and must have on this score been somewhat defective from the very first. For a century before the advent of British Rule these works remained neglected on account of wars and political changes and in 1801, when the East India Company took over the Tanjore district, irrigation in the delta was rapidly deteriorating, the channels were silting up and fields were left uncultivated for want of proper water supply.

To re-establish satisfactory irrigation conditions was one of the first problems for the British Government. In 1836 Sir Arthur Cotton built the Upper Anicut across the Coleroon to divert more water into the Cauvery. To make up for the consequent diminution in supply to the Lower Coleroon irrigation, the Lower Anicut (70 miles below the Grand Anicut) was also built across the Coleroon. But the supply in the Cauvery during floods became too great to be controlled and began to cause serious damage to the bed and banks of the Cauvery. To check this tendency, a grade wall called the Cauvery dam was built in 1845 across the Cauvery at the Upper Anicut. Further improvements followed, the most important of these being the construction of the regulators across the Cauvery and the Vennar at the Grand Anicut, the cutting down of the crests of the Upper and Lower Anicuts, the provision of lift shutters at these anicuts capable of holding extra supply for the benefit of irrigation. Regulators across the various minor rivers were also constructed at the sites of all the important offtakes in the delta. These improvements made the distribution of water-supply more systematic by placing under complete control whatever quantity of water was available at the Upper Anicut, but there still remained the defect of highly fluctuating supplies with long spells of drought to be got over. A storage reservoir of a size that could help the delta to tide over the spells of drought by storing the surpluses when available was the obvious solution and the Mettur Dam was the result.

In addition to these, bed regulators were constructed in place of Korambus which had to be reformed after every flood, resulting in interrupted supplies. Several works were carried out under Grow More Food drive also to extend irrigation by improvement of duty.

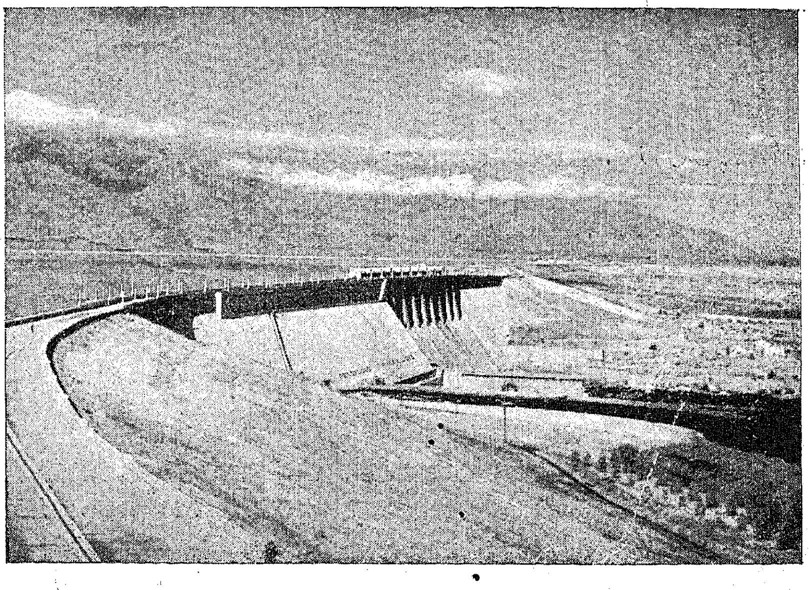
The Cauvery river irrigates about $2\frac{1}{4}$ lakhs of acres in Mysore State. Above Mettur there are about 6,000 acres of irrigation under the tributaries of the Cauvery in Kollegal taluk. Between Mettur and Grand Anicut there are several old irrigation channels irrigating about 135,000 acres. Below Grand Anicut, irrigation under the Cauvery is about 1,400,000 acres including 300,000 acres contemplated under the Cauvery-Mettur Project.

The Lower Coleroon anicut which is 70 miles below the Grand Anicut consists of regulator across the Coleroon with canals taking off on either side of the river with an irrigation of about 120,000 acres in Tanjore and South Arcot districts. The Vadavar and the North Rajan taking off from the left side irrigate lands in South Arcot district and Kumukimanniar and South Rajan taking off from the right irrigate lands in Tanjore district.

The total irrigation under Cauvery and Coleroon below Mettur Reservoir is about 16 lakhs acres. The existing irrigation under the Bhavani, Noyyil and Amaravathi comes to about 80,000 acres. Since there was still scope for utilising more water from the Cauvery basin the following schemes have been launched.

And now Bhavani dam

A reservoir was formed across Bhavani about 22 miles from Mettupalayam with a capacity of about 28,000 M.C.ft. The catchment of the river at the site is 1,621 square miles. The dam is of masonry in the river portion and of earth at the flanks.



Lower Bhavani Dam.

The earth dam is nearly 5 miles long and its maximum height is 140 feet. A canal 124 miles long taking off on the right will irrigate 207,000 acres of dry crops in Gobichettipalayam, Bhavani, Erode and Dharapuram taluks of Coimbatore district and Karur taluk of Tiruchi district. This is the first scheme where irrigated dry crops are tried in this State.

A reservoir on the Amaravathi about 15 miles from Udumalpet is under execution. The catchment area of the river at this site is 324 square miles and the capacity of the reservoir will be 3,600 M.C.ft. In this case also the dam will be of masonry in the river portion and of earth at the flanks. A canal 40 miles long taking off from the left of the reservoir will irrigate 15,000 acres half wet and half dry crops in Udumalpet and Dharapuram taluks of Coimbatore district.

Since it was not possible to achieve full development of irrigation of 301,000 acres as contemplated under Cauvery-Mettur Project, a scheme to irrigate 17,000 acres in Coimbatore district and 28,000 acres in Salem district by supplying water from Mettur Reservoir was taken up. Water will be supplied for half wet and half dry crops in rotation from 1st August to 15th December in normal years. The scheme consists of a canal taking off from the high level channel of the Mettur Reservoir and running for about 27 miles in Coimbatore district. At about the fourth mile a branch takes off from this canal and crosses the Cauvery through a pressure aqueduct and runs for about 40 miles in Salem district. This scheme is nearing completion.

Two more canals are proposed to be excavated under the Second Five-Year Plan. The right side canal 86 miles long from above the Kattalai Bed regulator will benefit 20,622 acres comprising 16,141 acres in Tiruchi taluk and the balance in Tanjore taluk, mostly, under tanks, utilising flood flows of Cauvery. The scheme has just been sanctioned and preliminaries are being started.

Another canal 54 miles long from the left of the Upper Anicut to benefit 22,114 acres in Tiruchi district has also been sanctioned recently. The ayacut will be mostly under tanks utilising flood water of Cauvery as in the previous case. This scheme also will be taken up for execution this year.

A proposal for forming a reservoir on the Noyyil river with a view to stabilise the existing irrigation under tanks and channels is under consideration. Since the yield from the river at the site is not appreciable, it is proposed to divert some flows from the Siruvani reservoir through the existing tunnel.

With all the existing and new irrigation now proposed in the Cauvery basin we will be utilising 85 per cent of the total yield. Even in Godavari and Krishna not more than about 12½ and 25 per cent respectively have been utilised. Under Thambraparani which is supposed to have been well developed with compounded double crop, the existing utilisation is only about 68 per cent. We have thus put the Cauvery to its maximum use. It is the only dependable source for Madras State, in fact it is the life-line of this State.

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(South India)

Why the Metric System ?

About 80 years ago the question of standardizing weights and measures in India was taken up. The tola-seer system, based on the weight of the rupee, was considered unsuitable as a standard because it was not capable of accuracy. The foot-pound system of England was also rejected because it was 'An organic change not convenient to the people of India'. The Metric System was considered most suitable though it was not brought into force. Emphasizing the unsuitability of the British system for India, John Strachey wrote, about 70 years ago, "The English system of weights and measures is in itself most complicated and inconvenient and the sole reason that can be assigned for maintaining it is that it has existed for centuries and the people of England have become accustomed to it. The proposition that we should deliberately impose such a system on India seems to deserve no discussion."

India has chosen the simple decimal system of weights and measures which is internationally popular; the adoption of the Metric System will also make day-to-day work easy.

The urgent need for adopting a uniform system arises out of the fact that there are over 100 different systems of weights and measures in India today.

Agricultural marketing officers in the various States have reported on the wide-spread loss to the agriculturists and the malpractices adopted by the wholesale buyers. "While purchasing from producers the merchant uses larger weights and measures and while selling he uses smaller weights and measures." Such practices naturally lead to mutual suspicion between the cultivator and the wholesaler, and "the producer is tempted to make up by mixing dirt and dust what he loses in weight".

Such confusion and loss can be ended only by fixing definite standards of weights and measures for the whole country. This is the purpose of the bill, now before Parliament, for introducing the Metric System.

Chaos and Confusion

As early as 1947, Rajaji said "The variation in the present units of weights and capacity may be described as almost chaotic and it is necessary to bring about reform by way of uniformity, whether we adopt the Metric System or not". What shall be the standard? The weights and measures now in use are unsuitable for standardization because they are neither uniform nor widely in use. The seer, for example, is practically unknown in many parts of the South; and it varies in value from 8 to 112 tolas all over India. We could, perhaps, fix a weight equivalent to a kilogram and call it a seer. Then, except for the name, the standard seer would still be new!

Even in Britain which employs the foot-pound system, there is recognition of the superior merit of the Metric System. Lord Kelvin says, "I believe I am not overstating the truth when I say that half the time occupied by clerks and draftsmen in engineers' and surveyors' offices—I am sure at least one half of it—is work entailed upon them by the inconvenience of the present barrage of weights and measures. The introduction of world Metric System will produce an enormous saving in business offices of all kinds —engineering, commercial and retail shop".

Engineers and students of science are already employing the Metric System. In some form or the other the Metric System is also familiar to most of us. We tune the radio on say, 356 or 61 metres. Snap shots are taken on size 6 × 6 centimetres or 6 × 9 centimetres. Sports events are held on the Metric System : 100 metres, 400 metres, 5,000 metres etc.

Phased Programme

In the course of the next 10 years different sections will gradually switch over to the Metric System. The Railways, for example, will first revise the schedules of rates and tariffs and also instruct the staff in the use of the Metric System; during the next phase the tariff will be brought into use, fares and time-tables will show both the systems, and finally, during the third stage the Metric System will completely replace the present system. Similarly the Posts and Telegraphs Department, the Defence Ministry and Customs Department, etc., have plans for the gradual introduction of the System, so that day-to-day transactions will be easy, and normal smooth working will not be upset.

In other words, the change-over will be completed over a period of ten years. At the end of it, the Metric System will extend to day-to-day domestic transactions. By this time the country will have become familiar with the operation. First-hand knowledge of its working will help realization of the intrinsic ease of operation which makes it superior to other systems.

Commending the Metric System, the Prime Minister has said: "We are, on the whole, a conservative country and it is not very easy to change old-established customs. But I am sure that our decision to adopt the Metric System is the right one from every point of view. For the scientist, the technician and the statistician, it is the only system that can be used. But even to the people generally this will bring relief and many facilities. There will no doubt be slight inconvenience to begin with, but this will not last."

The total value of diamonds imported in India in 1955–56 was Rs. 13·09 lakhs as against Rs. 10·09 lakhs in 1954–55.

The production of Soda Ash in the country rose from 12,000 tons in 1946 to 77,270 tons in 1955.

Encourage Big-scale Storing of Agricultural

An important recommendation of the Rural Credit Survey Committee (1951–54) *relates to development of warehousing as a means of extending credit facilities. This article indicates the role warehousing will play in India's agricultural progress and the direct benefits the farmer will derive from it. It also shows how the National Co-operative Development and Warehousing Board to be inaugurated on November 7 by the Prime Minister proposes to establish a network of warehouses in the country and promote agricultural progress.*

Warehousing, a much misunderstood term in India, is often confused with simple storing operations. It is storing, no doubt, but as a regular industry and an important adjunct of marketing.

As marketing becomes more and more orderly, storing would need to become more and more specialised, and would require special agencies working on a commercial basis. In short, warehousing is specialised storing for commercial gain by specialised agencies.

Need for Warehousing

The importance of warehousing has been stressed by a number of committees. As far back as 1928, the Royal Commission on Agriculture in India referred to the urgent need to provide warehouses and said :

" The future may see in operation in India, the type of licensed warehouses conducted for profit within the market premises somewhat on the lines of the system which exists in the United States of America. The nature of agency providing such facilities is not of first importance. The urgent need is of accommodation at the disposal of the cultivator, at moderate cost."

The Central Banking Enquiry Committee in 1932 laid even greater stress on warehousing, and remarked " that considerable improvement of the credit situation and the money market in India can only, under present conditions, be achieved by improving and extending as soon as possible the storage and warehousing of goods in order to enlarge the basis of credit system."

Similar recommendations were made by the Agricultural Finance Sub-Committee of the Policy Committee on Agriculture, Forestry and Fisheries (Gadgil Committee) in 1944, and by its Co-operative Planning Committee in 1946. The Marketing Sub-Committee of that Policy Committee also stressed the importance of warehouses.

In 1949 the subject was thoroughly studied by the Rural Banking Enquiry Committee which recommended the setting up of a Warehousing Development Board, financed jointly by the Central Government, the Reserve Bank and the Provincial Governments. In the first Five-Year Plan, the Planning Commission also strongly recommended to the State Governments and the Reserve Bank to take all necessary measures for development of warehousing.

State Activity in Warehousing

The Reserve Bank of India—one of whose main responsibilities is to provide adequate credit for agricultural operations at reasonable rates of interest—has also been devoting a great deal of attention to the subject.

In 1944, the Bank addressed to all Provincial Governments a letter bringing out the importance of warehouse receipts which could serve as collateral for providing credit to agriculturists who deposit their produce in the warehouses. For facilitating action in the Provinces they appended a model Bill to the circular which could serve as a basis for provincial legislation.

Again, in December 1948, the Reserve Bank circulated another model Bill, redrafted on the basis of suggestions received from some of the State Governments and, along with the Bill, appended a set of model rules for this purpose. But for a new activity such as this, public support was not forthcoming in adequate measure. This experience fortified the general conclusion of the Rural Credit Survey Committee that, to rehabilitate the agriculturist, an allout drive, based on integrated development of credit, marketing, processing and warehousing, with State participation, was essential. Accordingly, it recommended that warehousing should be undertaken by the State itself.

Salient Features of Warehousing Act

These recommendations were accepted by the Government, and the Agricultural Produce (Development and Warehousing) Corporations Act, 1956, was passed by Parliament in June 1956. The Act provides for the constitution of a National Co-operative Development and Warehousing Board and Central and State Warehousing Corporations.

This Board was set up on September 1, this year, under the chairmanship of Shri Ajit Prasad Jain, Minister for Food and Agriculture. It consists of representatives of the Central Government, the Reserve Bank and the State Bank of India, the Chairman, Forward Markets Commission, and nine non-official members.

The function of the Board generally is to plan and promote programmes for the production, processing, marketing, storage, warehousing, export and import of agricultural produce through a co-operative society or a warehousing corporation. One of its specific functions is to develop warehousing by subscribing to the share capital of the Central Warehousing Corporation or to advance loans or grant subsidies to that Corporation or any State Warehousing Corporation.

Warehousing Corporation

The actual execution of the warehousing programme will be undertaken

Produce to Serve as Security for Credit

by the Central Warehousing Corporation and the State Warehousing Corporations in each of the 13 States that come into being on November 1.

The Central Warehousing Corporation will set up about 100 warehouses at centres of all-India importance during the course of the Second Five-Year Plan. These warehouses will have a capacity ranging from 10,000 to 20,000 tons, as needed at a particular place. The State Corporations will be set up at centres of more local importance about 250 warehouses whose

By SHRI KRISHAN CHAND, I.C.S.,

Joint Secretary, Ministry of Agriculture.

capacity will range from 1,000 tons to 10,000 tons. At the same time co-operative societies will be assisted to set up godowns at centres below subdivisional level where there will be no warehouses of corporation.

These warehouses and godowns will, it is expected, provide storage accommodation to the extent of about 3 million tons. The commodities which will be accepted at these warehouses, to start with, will be foodstuffs, including edible oilseeds, cattle fodder, including oilcakes, and other concentrates, raw cotton (ginned as well as unginned) and cotton seed, raw jute and vegetable oils.

More commodities will be added as experience is gained and more space becomes available.

Personnel for Warehouses

A large technical staff will be required to man these warehouses. Each warehouse will have, besides the warehousemen, a fumigation assistant and a technical assistant. It will be the duty of the fumigation assistant to examine the commodities from the point of view of freedom from disease and to ensure their wholesomeness during storage. The technical assistant will be responsible for grading of the commodities, and will have a small laboratory at his disposal for this purpose.

It is estimated that apart from the accountants, clerical and labour staff about 800 technical personnel will be required. Since persons with experience of the working of licensed warehouses are not available, the persons appointed will be given intensive training before they are posted to the warehouses.

Legislation must exist in each State to license and regulate the working of the warehouses. At present such legislation exists in Andhra-Telangana, Bombay, Bihar, Madras, Karnataka, Kerala and Madhya Pradesh. The remaining States of Punjab, Rajasthan, Assam, West Bengal, Orissa and Uttar Pradesh have yet to enact legislation. They are expected to do so shortly.

Warehouse Receipts as Security for Credit

The most important aspect which the Government has in view in undertaking this programme of setting up a chain of warehouses all over the country is the creation of warehouse receipts which can serve as a collateral security for the provision of credit to the agriculturists. For each lot deposited in a licensed warehouse, a receipt will be issued to the depositor showing the quantity and the quality of the goods deposited. This receipt could be discounted with any bank to obtain loans or transferred to any other person, since it will be a negotiable receipt.

Incidentally, the existence of banking facilities in the rural areas is a pre-requisite for the measure to be effective. Steps, therefore, are being taken to open branches of the State Bank of India in areas where none exists at present.

This facility should go a long way in eliminating distress sales by the cultivator at the time of harvest. The credit available will enable him to put his goods on the market as and when found most profitable and not necessarily at the time of harvest, when prices are low on account of heavy arrivals. At the same time, the consumer will be assured of a regular flow of goods to the market on a more or less even price all through the year.

Advantages of Warehousing

The creation of the warehouse receipt and the consequent provision of credit are not the only advantages which can be claimed for warehousing. The storage of goods in warehouses constructed on scientific lines and looked after by expert technicians trained in scientific storage will eliminate large losses through insects, pests, rats, etc. Even on a conservative estimate these losses amount to about 3 million tons every year.

Another advantage which will accrue in the matter of smooth trading will be the grading of produce to be stored in these warehouses. Workable standards for various grades are being evolved in respect of all the commodities which will be accepted in the warehouse and all lots coming into the warehouse will be graded. When these grades become well recognised all over the country, not only will higher returns be assured to the producer but trading in these quantities will become smoother. It will then not be necessary physically to check the commodities nor will trading by samples be necessary. Mere indication of grades would assure to the purchaser the quality for which he pays.

In the task of national reconstruction warehousing is but one of the many activities in hand. But without a widespread programme of warehousing, marketing cannot be made more orderly, huge wastes cannot be eliminated and, above all, adequate credit at cheap rates with an assured recovery cannot be extended to the cultivator. The National Co-operative Development and Warehousing Board which has been set up is meant to fulfil this need.

Animal Nutrition—Our Immediate Problem

By V. MAHADEVAN,
Professor, Veterinary College

" Food is the instrument of nourishment and Nutrition is the act of using it." The Science of Animal Nutrition is one of the youngest sciences, but as an art of Animal Husbandry it is as old as human civilization.

Although the maximum quantity and optimum quality of an animal product like milk, wool, meat, etc., produced by an animal is determined by its genetic constitution, the importance of Nutrition lies in the provision of concrete materials as balanced feed for the full expression of its genetic potentialities. The problem of Animal Nutrition is only one of the important inter-connected aspects of national prosperity linked essentially with soil fertility or soil nutrition, crop or plant nutrition, animal nutrition and human nutrition, which constitute as a whole the agricultural advancement of a country like India.

The earth is the mother of us all—plants, animals and men. Everything else our bodies need except air and Sun, comes from the earth. Nature treats the earth kindly, but man treats her harshly by over-ploughing, over-grazing, making the earth barren, erroded and lowest in soil nutrients. Right thinking, earnest action and team work are needed to preserve the potentialities of fertile mother earth. A teaspoonful of fertile soil is alive with a seething mass of about one thousand millions of bacteria, twenty millions of actinomycites, one million of fungi, one million of protozoa, hundred thousands of algae and thousand yeasts—all of which derive nourishment from soil, crop residues, green and organic manures and fertilizers which are necessary for optimum nutrition of the soil for the proper production of forage plants.

Prime Minister Pundit Nehru has emphatically called attention to this important aspect recently on September 7th in Rajya Sabha, thus: " They must think of more and more green manures and other types of natural manures which unfortunately were wasted today for the intensive cultivation and increase of the yield per acre of cultivation.'' Our soil today is the lowest in yield for we waste the valuable farm yard manure, dung as fire cake and urine of animals wasted away.

All animals including men get their nourishment ultimately from the soil. The plants require for their growth about thirty-four elements out of which twenty-four elements in turn are used by animals for building flesh, blood, bones and for making milk. But, if the soil is deficient in one of the necessary elements, the plant may be unable to get enough of it to supply the needs of animals. This is notably true of phosphorus, cobalt and copper in several parts of our country. Animals feeding on plants in these areas are sub-normal in development and even subject to severe diseases. The whole subject of the effect of soil composition on plant composition and through this on animal health and human health deserves the increasing attention which it is getting today. Soil management, agricultural practices and animal husbandry, besides influences of climate, are the ascending steps in the ladder on which a stable, healthy and vigorous civilisation of human activities is built in a predominantly agricultural country like India.

Importance of a well-nourished cow

During the First Five-Year Plan, we have achieved self-sufficiency in our foodgrain production. These cereal foods require a minimum supply and consumption of at least ten ounces of milk per adult per day to make them nutritionally balanced. As the total milk supply and the average amount of milk produced by each cow is very low, which gives us only less than one-fifth of our requirement, the immediate importance of Animal Nutrition in the present Second Five-Year Plan, is for improving the milk yield of our cows and draught capacity of our work cattle.

Though only 413 pounds of milk is the average yield of all of our cows, well-nourished animals in Government Farms have given as much as 10,000 pounds in 300 days and as an example, one of our best cows in the Sindhi herd, at Hosur Cattle Farm has given in about ten years of her productive life 90,917 pounds of standard milk with 4 per cent butter fat or 3,637 pounds of butter and six heifer calves and four bull calves to extend its high future yielding generations, when she was sold still useful. Nearly four million gallons of blood must have passed through her udder to produce about ninety-one thousand pounds of milk in ten lactations. The great efficiency and importance to humanity of the well-nourished dairy cow in converting material not edible by man into the invaluable human food, milk, is not generally appreciated. A cow producing annually 4,000 pounds of milk employs or uses 80 per cent of the feed for its upkeep and 20 per cent for producing milk; but when milk production attains 8,000 pounds per annum, only 55 per cent of the feed serves for maintenance as against 45 per cent for production. A recent F.A.O. publication called *Agriculture in the World Economy,* says: " How widely is it known, for example that the most important agricultural product in terms of either value or weight is neither wheat nor cereals nor meat, but milk ?" The three keys to high goal farming and high net profits are high output per acre, high feed efficiency per livestock and high output per man.

The three cheapest foods of milch cow are pasture or green grass, hay and silage, or preserved green grass. We are short of the three ideal feeds to make cheap and more milk, better growth and performance of our cattle. As cereal straws which are available from more than six million acres of irrigated cultivation in our State are very poor in nutrients, lacking completely in digestible protein, we try to compensate the deficiencies in this roughage, while feeding our cattle, by the addition of concentrates like oil cakes, brans and husks. Even here

the estimate of our requirements for all our numerous cattle makes us deficient in the supply of these concentrates.

The case for Alfalfa

In our intensive agriculture under irrigated conditions we have very little land for grazing. Forest grazing is far off to be of use to our milch cows which are needed very close to our homes. With minimum of available land how are we to make our cows receive a complete and nutritious feed and make her yield maximum milk ? Is there an ideal forage plant which can form a complete food for the cow and which can be produced to a maximum yield with minimum labour and make it competitive with other commercial crops raised under irrigation. Yes ; among the numerous forage plants, lucerne or alfalfa has been known from very early times as the " Queen " of the forage plant. The name alfalfa means in Spanish language " The best forage plant ". It builds soil fertility and furnishes large yields of high quality feed for cows. It is the highest in feed values of all the common hay and forage crops. Its native home is Turkistan in Asia wherefrom it has followed the path of historic civilisation from east to west. Today it is grown in more than thirty countries and there are about twenty-five different varieties which can suit all climates and soils. In India too, it has been famous till fifty years ago, for we learn that two varieties of lucerne, one a frost resistant strain from Ladak in Himalayas and another a drought resistant kind called Indian Alfalfa from Poona were introduced in the United States in the beginning of this century and they have been found to thrive well and their cultivation today extends to more than twenty million acres in the States. Lucerne or Medicago Sativa is a perennial legume with deep penetrating root systems with a very high water requirement and phosphorous and potash in large amounts as manure. Once cultivated during the cool weather, it can stand drought or heavy rainfall. It gives an excellent soil cover and also serves as a good green manure crop. It is used as a rotational crop to increase the soil fertility. It can give eight to nine cuttings under irrigated conditions and about two cuttings under non-irrigated conditions in a year. If an initial stand is established suiting the soil with the addition of required bacterial culture fertilisation with superphosphate and potash, it easily maintains itself in the subsequent years by its roots penetrating even more than twenty to thirty feet depth to draw its nutrients and water. It is usually cut and made into hay and as the hay contains 15 to 28 per cent protein with all the vitamins and minerals particularly being rich in calcium and with high palatability cows can consume as much as three pounds for each 100 pounds of live weight per day as a single balanced food. By feeding this hay, many of the high yielding cows do not require protein concentrates. The yield varies from four to nine tons per acre and even as high as fifteen tons are reported under the best managed experimental plots. Though it is not fit for grazing or for feeding as green crop in larger amounts to the cows as it causes undesirable bloat, alfalfa mixed with grass is harmless for grazing and recently a hybrid creeping alfalfa which can be used for grazing has been developed by crossing the Ladak variety with a strain known as Grimm or a German variety. Alfalfa meal, which is a rapidly dried leaf, is used for poultry. Alfalfa leaf juice is used for human consumption as it is five times richer in vitamin C than the same amount of orange juice. A high yielding cow in a lactation yields about ten thousand pounds of milk, by eating daily about thirty to forty pounds of alfalfa hay as the sole feed for several lactations without any detrimental effect in breeding efficiency or milk yield or butter fat content. Alfalfa can be used as a rich green manure in preference to other green manure crops because it gives nearly two tons per acre per cut under best managed conditions.

Among the forage plants alfalfa in its high yield per acre and high milk yield as a completely balanced food per cow and as a perennial legume, suited to varying conditions of soil and climate really deserves its name as the " Queen " of the forage plant even under modern conditions, justifying the three important aspects of high level farming by high output per acre and high feed efficiency per cow and high output per man per unit land. Other legumes can also take their place in the forage economy but only second to alfalfa. If we can grow alfalfa at

(*Continued from page 16*)

least one painter who has to be taken seriously—Maqbul Fida Hussain. Mosaic in its psychological import, his presentation condenses many memories, held together by a masculine violence rather than by a feminine harmony and delivering its cryptic message with a finality that has to be respected though it cannot be often loved. The difficulty with some of the other artists is that, even allowing for the cryptic nature of expressionist statement, one is not sure of the semantic validity of the whole business, one is not certain that there is an inner meaning seeking expression.

The present is a transitional phase in the history of Indian art. Tradition has dissolved on the surface but lives in innumerable concealed prolongations. Dissolving cultural frontiers have brought strange merchandise from afar in which our men are learning to traffic with increasing adeptness. Given a fair measure of sincerity on the part of the artist and the critic, we can be optimistic about the future.

Increasing Sugar Production

The production and despatches of sugar from indigenous factories ted to 18·59 and 17·48 lakh t to October 31, 1956, in the c season as against 15·90 and lakh tons respectively in the c sponding period of the last year. ion, stocks with the factories on Octo for 31, 1956, stood at 5·42 lakh tons as compared with 4·32 lakh tons las year.

More Sugar for Free Sale

The Government of India have released a further quantity of 1·60 lakh tons sugar for free sale. This brings up the total releases so far made for free sale out of the 1955–56 production to 16·31 lakh tons.

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least one acre out of every hundred acres of irrigated land, the hay produced under optimum conditions can supplement the cereal straws in the place of costly concentrates and the minimum amount of green grass required for feeding our milch cows to increase their milk yield, for alfalfa hay and dairy cow go hand-in-hand in all the dairy countries.

Writings of Gandhiji

* *Review By* SRI N. MURUGESA MUDALIAR,
Deputy Secretary, Agriculture Department, Government of Madras.

This is a book of selections from Gandhiji's writings brought up to 1948. It bears a Foreword by Gandhiji himself, in which he has stated that the selections made by the compiler show the thoroughness with which he has gone into the subject. Gandhiji has been writing almost throughout his life and his writings covered a wide variety of subjects. He wrote not merely for the pleasure of writing as thought and writing had always been with him tools for more efficient action towards the ideals which he tried to achieve. The writings represent not mere expressions of views and opinions but a subjective record of his ideals, aspirations, struggles and failures. A compiler of selections of such writings is thus both at a disadvantage and at an advantage, as the process of elimination is difficult while the result of selection cannot but always be satisfactory. The planning of the selections adopted by Sri Nirmal Kumar Bose is however original and different from a few other compilations that have so far been published. As the foundations of Gandhiji's life and work were based on a firm faith in God, his ideas about God form the first chapter in the book. The second and third chapters deal with the discipline necessary for the realisation of truth and the fundamental beliefs and ideas of Gandhiji in his quest of truth. Later chapters deal with Satyagraha, Non-Violence, religion and morals, etc. A few other chapters deal with the gospel of work, distribution of wealth, industrialism and class-war. Two chapters are devoted to Self-Government and Indian Freedom and one for Education and one for Women's Problems. The last chapter "Miscellaneous" covers a wide variety of subjects, like health, swadeshi, planning, etc. The classification of topics by the compiler is as good as could be.

The selections are made not only from Gandhiji's Autobiography and his writings in the *Young India*, *Harijan* and *Navajivan* but also from other publications containing Gandhiji's utterances and writings from time to time. One important difference between this compilation of selection and others is that the passages selected are important not merely for their aphoristic condensation of thought but also for giving more or less a complete and intelligible statement of Gandhiji's views on various topics. For example, a quotation like this: "To me God is Truth and Love; God is ethics and morality; God is fearlessness; God is the source of light and life and yet he is above and beyond all these," is merely a restatement of old truths. But the compiler has taken care to select passages which give Gandhiji's own experience of the Truth, like the following: "I have made the world's faith in God my own, and as my faith is ineffaceable, I regard that faith as amounting to experience. However, as it may be said that to describe faith as experience is to tamper with Truth, it may perhaps be more correct to say that I have no word for characterising my belief in God." This is an original and courageous statement, which only experience like Gandhiji's can embolden. Here is again a confession and an affirmation: "I am but a poor struggling soul yearning to be wholly good—wholly truthful and wholly non-violent in thought, word and deed; but ever failing to reach the ideal which I know to be true. It is a painful climb, but the pain of it is a positive pleasure to me. Each step upward makes me feel stronger and fit for the next." Gandhiji regarded Ahimsa as the farthest limit humility for the perception of truth which is God. As his approach was not intellectual or metaphysical but emotional, he says, "He is no God who merely satisfies the intellect if he ever does. God to be God must be true to the heart and transform it." But Gandhiji was deeply aware of the human limitations for the apperception of God as Truth and intimate experience. Gandhiji's whole life was a striving to annihilate ego and to seek God's guidance through prayer. "Prayer is not asking," he says, "but is a longing of the soul. It is a daily admission of one's weakness . . . It is better in prayer to have a heart without words than words without a heart." Gandhiji sought God's guidance on His terms and not on his own.

The compiler has taken care to select not only those utterances of Gandhiji which would appeal to the orthodox thinkers but also to the modern minds. The selections represent Gandhiji both as one who had the deepest regard for tradition and experience but also as a revolutionary and iconoclast. Listen for example to this passage: "Rationalists are admirable beings, rationalism is a hideous monster when it claims for itself omnipotence. Attribution of omnipotence to reason is as bad a piece of idolatry as is worship of stock and stone believing it to be God. I plead not for the suppression of reason, but for a due recognition of that in us which sanctifies reason." It is easy to go on giving examples of the variety of subjects covered by the book.

Gandhiji once made the astonishing statement: "As a matter of fact, my writing should be cremated with my body. What I have done will endure, not what I have said and written . . . What I have said and written is useful only to the extent that it has helped you to assimilate the great principles of truth and ahimsa. If you have not assimilated them, my writings will be of no use to you." Doubtless, this book will induce its readers to follow in however small a manner the great principles which Gandhiji upheld in his life. For this reason, his writings deserve to be widely published and

(*Continued on page* 27)

*** SELECTIONS FROM GANDHI.**

By NIRMAL KUMAR BOSE

Published by Navajivan Publishing House, Ahmedabad, pages I *to* XXIII *plus pages* 1 *to* 311. *Price, Rs.* 2.

"SEE FOR YOURSELF." Nearly 400 farmers of the State were taken on a 7-week "see for yourself" tour of India by the Government of Madras. Sri V. R. Ramanatha Iyer, Mayor of Madras, saw them off at Rayapuram Station on 9th November 1956.

All about India's Rice

The area under rice in India is about one-third of the total world acreage under rice. India's production is one-fourth of the total world production and her average yield per hectare is 1,220, kgs. of paddy whereas the world average is 1,650 kgs.

India is the second largest producer of rice in the world, the first place going to China. In 1954-55, India produced 24 million metric tons of milled rice, Pakistan 8 million metric tons, Thailand 3·6 million metric tons, and Burma 3·8 million metric tons. India is a large consumer too. In 1954, she imported roughly one-eighth of the internationally traded rice. India's intake of rice per capita is, however, low. Taking the post-war average (1947-48), rice consumption per person in India/Pakistan was about 68 kgs. per year, as against 164 kgs. per year in Burma, 121 kgs. per year in Indonesia, and 102 kgs. per year in Japan. During 1954, the price of milled rice in India was around Rs. 16–12–0 per maund as against Rs. 38–3–0 in Indonesia, Rs. 27–6–0 in Malaya, Rs. 14–15–0 in Egypt, Rs. 14–14–0 in Pakistan and Rs. 37–2–0 in the U.S.A.

Of the total area under rice in India roughly one-third is irrigated. The rest generally thrives in rain water. During 1954-55 the area under Japanese method of paddy cultivation was about 1·3 million acres and the total additional production as a result of this method of cultivation came to some 600,000 tons. In 1954-55, the highest yield per acre obtained in respect of a plot entered for crop competition in Madhya Pradesh was 5,606 lb. as against the average yield per acre of about 632 lb. of cleaned rice. The inter-State movement of paddy by rail and river was 1·3 million tons as against one million tons in 1953-54. The marketable surplus of rice in India is about one-third of total production, the rest being retained in villages for local consumption and seed.

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propagated. This handy compilation is one which should be in the shelf of every Indian home along with other books like the *Sayings of Ramakrishna*, the *Kural* and the *Gita*. The publishers would be doing a great service if the selections are translated into the Indian languages and published at a cheap price.

This compilation is not a mere book of great thoughts. It embodies the words of the greatest man of our times who stood witness to truth and a just and living God. It will give guidance for those who seek in any situation.

The book has an excellent index and as usual it is well printed. While the original price was Rs. 4, that of the second edition is only Rs. 2.

The 9th Session of the General Conference of the United Nations Educational, Scientific and Cultural Organization began on November 5th, 77 nations attending in Vigyan Bhawan, the newly constructed Conference Building in New Delhi.

The Conference was inaugurated by H.E. Justino Zavala Muniz, President of the 8th Session of the General Conference of the UNESCO. The Prime Minister Shri Jawaharlal Nehru, and Maulana Abdul Kalam Azad, Minister for Education, Government of India, and head of the Indian Delegation, addressed the Conference.

Photo taken at the commencement of the UNESCO Conference : Left to right—*Shri K. G. Saiyidain, Secretary, Ministry of Education ; Shri A. L. Mudaliar, Vice-Chancellor, Madras University (Deputy Leader) ; the Prime Minister Shri Jawaharlal Nehru ; Mr. Justino Zavala Muniz, President of the 8th Session of the General Conference of UNESCO ; Maulana Abdul Kalam Azad ; and Dr. Luther H. Evans, Director-General of UNESCO.*

Said Dr. Julian Huxly, in a message :

It is of happy augury that the General Conference on the tenth anniversary of UNESCO's founding is being held in that great Asian country, India. I can testify from my own personal experience to the devotion of India to the principles of UNESCO and the zeal with which she pursues their practice, in all fields of education, science and culture. I have been witness to the energy and inspired intelligence that Sir Sarvopalli Radhakrishnan has devoted to UNESCO, both as a member of the Executive Board and as leader of his national delegation. And in discussions I have been privileged to have with India's great statesman, Jawaharlal Nehru, I have realized how wholeheartedly he is ranged behind UNESCO's ideals and its practical operations.

Export Promotion Council for Leather formed

An Export Promotion Council for Leather has been formed, with the support of the Government of India, to maintain and promote the export of tanned hides and skins and leather goods.

This is the eighth in the chain of such Councils sponsored by Government to maintain and develop export markets for Indian products. The other seven Councils, already in existence, are those for cotton textiles, silk and rayon, plastics, engineering goods, cashew and pepper, tobacco and mica.

India's annual exports of tanned and dressed hides and skins are of the order of 470,817 cwt. valued at about Rs. 22·7 crores. This commodity is one of the most important foreign exchange earners, coming immediately after the first three major foreign exchange earners, viz., tea, jute manufactures and cotton textiles.

The export promotion Council for leather will undertake market studies in individual foreign countries, send trade missions abroad and appoint representatives or agents or correspondents abroad for purposes of collecting and disseminating among exporters statistical and other information regarding the export trade. The Council will also render all possible assistance in the matter of supervising and certifying landing weights or measurements of leather exported to foreign markets from India.

Two of its immediate objectives would be to institute quality control on tanned hides and skins intended for export and to diversify the exports of these commodities by establishing direct contacts with consumer countries.

The Joint Chief Controller of Imports and Exports, Madras, is the Chairman of the Council. It has as its members representatives of the industry and trade, the Development Officer (Leather), Development Wing, Ministry of Heavy Industries; the Cattle Utilization Adviser to the Government of India, Ministry of Agriculture, the Regional Director of Small Scale Industries Service Institute, Madras and a representative of the Government of Madras.

Development of Vitamin-Enriched Groundnut

Easy Process Patented

Groundnut is an important article of food, rich in poteins and vitamins particularly vitamin B1, and nicotinic acid. It has a high nutritive value and on account of its cheapness and abundent availability, is consumed by a large section of the population particularly the poorer classes in India's annual production of groundnuts is over 3·7 million tons of which a substantial proportion is used for edible purposes in the raw or roasted state and in the preparation of a variety of food articles.

Rich source of B1

The value of groundnut as a good sources of vitamin B1 is, however, greatly limited by the fact that it cannot be taken in large quantity, the kernel being difficult to digest and unduly rich in oil.

Investigations conducted at the Indian Institute of Science, Bangalore, have shown that it is possible to enrich groundnuts with more vitamin B1, so that an intake of a smaller quantity of the kernels would meet the daily human requirement of the vaitmin. The enriched groundnuts which contain a minimum of 100 micrograms of vitamin B1, per gram of the kernel as against 5–6 micrograms in raw kernels are found to be more palatable and attractive than the unprocessed kernels. They are also superior to some of the yeast preparations in respect of vitamin content. It is estimated that consumption of 10–20 grams of the enriched groundnut kernel per day would meet the daily vitamin requirements of an individual.

Mass Production Method

The process (covered by Indian Patent No. 44594) which has been worked out on a laboratory scale can be adopted to large scale production without much difficulty. The items of equipment required are simple. The main cost of enriching is the cost of Vitamin B1.

Parties interested in undertaking the commercial development of the process are invited to correspond with Secretary, National Research Development Corporation of India, Mandi House, Lytton Road, New Delhi-1.

Raising Cashew crop in Chingleput forests

The Cashew Regeneration area in Vandalur, which was shown to the Agricultural science Study Mission on 18th November 1956, comprises 4,500 acres of the Vandalur Rserved Forest and is one of 16 such plots of a total of 40,050 acres in which cashew is proposed to be raised in the course of the Second Five-Year Plan. This Scheme has been drawn up in accordance with the recommendations of the Spices Enquiry Committee. This cashew regeneration work is being carried out departmentally. The average cost of raising one acre of cashew plantation works out to Rs. 32 inclusive of wages paid to mazdoors, but exclusive of the cost of supervisory and technical establishment. The estimated cost of the five-year scheme is Rs. 30·32 lakhs and it has been included in the Second Five-Year Plan, to meet the growing demand for cashew-nut and cashew shell oil.

The Soil in the area is sandy loam, but the forest floor has undergone severe sheet erosion on account of faulty management in the past. The climate is tropical with an average annual railfall of 40 inches and the mean annual temperature is about 82°F. Cashew has been raised successfully in the past on a small scale in this region by the Forest Department.

The Cashew regeneration work is being carried out departmentally and the technique adopted is as follows :—

The area was first surveyed and demarcated with a cut line 6 feet wide. The standing growth was cleared and 2 feet wide strips 33 feet apart were formed. The area was fenced effectively to a height of 4 feet all round with brush wood. One foot cube pits were dug in the strips at an espacement of 16½ feet. Round each pit saucer shaped depressions were formed. These depressions are 3 feet in radius and slope towards the pit. From these saucers all tree and other plant stumps were removed.

Cashew seeds were dibbled in alternate pits in the month of September Two seeds were dibbled in each pit so that at least one healthy seedling may result in each pit. Basketted seedlings of cashew obtained from the nurseries raised specially for the purpose, were planted without disturbing the root system in the remaining pits.

One weeding will be done around the pits when these plants become three months old. Replacement of casualties will also be done then. The second weeding and soil working will be done when the plants become six months old. During the second year of the plantations casualty replacement and soil working will be done at the commencement of the South-West monsoon.

For raising the plantations, one mazdoor for every 50 acres and one head mazdoor for every 100 acres have been employed. Thus in an area of 500 acres which is a unit, there will be 10 mazdoors and 5 head mazdoors working daily.

The average cost of raising one acre of cashew plantation is Rs. 32 inclusive of wages paid to the mazdoors, but exclusive of cost of establishment of supervisory staff.

A.I.R. Tiruchirappalli

Rural Programmes for December 1956

Saturday, 1st December 1956—
Thikkutheriyatha Kattil: Song.
The Adult Literacy Class: Tirukkural—Aruludaimai (Kural Nos. 243 and 244)
Deviyai potriduvome: Song.
National Savings: Discussion.
Weekly review of market rates.
Market rates and water level readings.
Topical discussion; weather report.

Sunday, 2nd December 1956—
Mannarippu: Discussion.
Grama Kalakshepa Mandapathil: Thilakavathiar: Musical discourse in Tamil by H Azhaigiamanavala Naidu.
Market rates and water level readings.
Topical discussion; weather report

Monday, 3rd December 1956—
Our cattle shed: Discussion.
Folk art: Kaman Dahanam by S.P. Natarajan and Party
Market rates and water level readings.
Topical discussion; weather report.

Tuesday, 4th December 1956—
Farm Forum: Discussion: Participant: M. Subramaniam.
Gnana Chuvadi: Isai Nigazchi.
Tozhil Narayam (3) Thachuppattarai Neelameghan—Serial Skit by Sukhi.
Market rates and water level readings.
Topical discussion: weather report.

Wednesday, 5th December 1956—
Listeners' Letters.
Poocharam: Songs on Lord Buddha.
Araichikoodam (The latest in research): Discussion on subjects of interest and use to farmers.
Market rates and water level readings.
Topical discussion; weather report.

Thursday, 6th December 1956—
Farm Forum: Discussion—Participant: N. Sivasubramaniam.
Folk Ballad-Raja Desingu: Part IX.
Namadu Dittam-(9) Welfare of Harijans: Discussion.
Market rates and water level readings.
Topical discussion; weather report.

Friday, 7th December 1956—
Ani Alaankaram-(6) Thandai Kolusu: Musical feature by N. Raghavan.
Irulil Oli: Serial feature on Gandhiji's life.
Grama Padasalaiyil: Nanmanikakadigai: Exposition.
Market rates and water level readings.
Topical discussion; weather report.

Saturday, 8th December 1956—
Vellaithamarai: Song.
The Adult Literacy Class: Tiurkkural-Aruludaimai-(Kural Nos. 245 and 246).
Tennamaracholaiyile: Song
Education in Madras State: Talk in Tamil by K. Venkatasubramaniam, arranged by the Director of Public Instruction, Government of Madras
Weekly review of market rates
Market rates and water level readings.
Topical discussion; weather report.

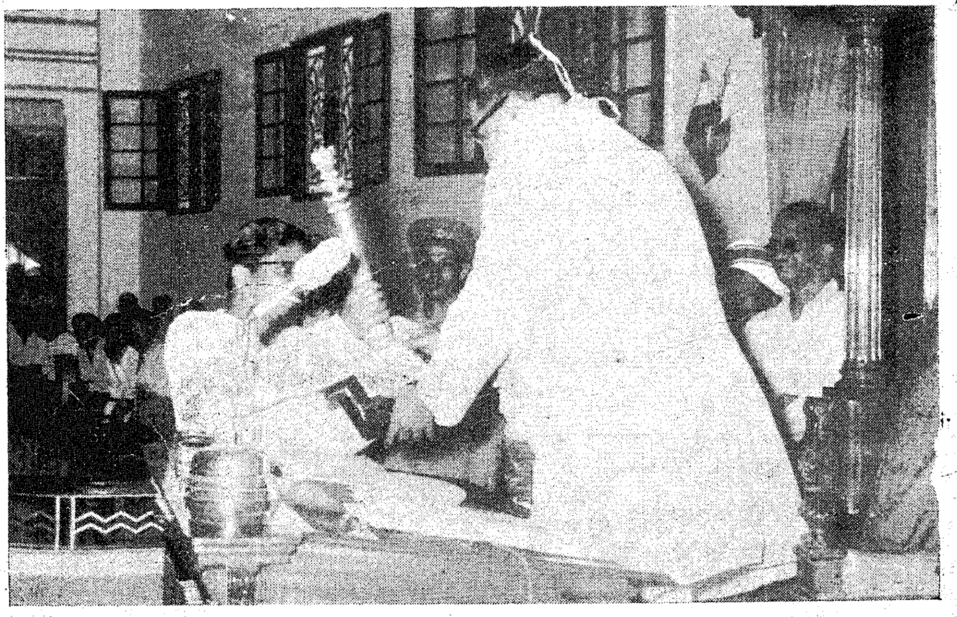
Sunday, 9th December 1956—
Porukku Vidaigal: Discussion
Grama Chiruvargal: Feature on Five-Year Plan.
Market rates and water level readings.
Topical discussion: weather report.

Monday, 10th December 1956—
Samathuvapathai: Feature
Folk Art: Villupattu by K Aiyam Pillai and Party.
Market rates and water level readings.
Topical discussion: weather report

Tuesday, 11th December 1956—
Farm Forum: Discussion—Participant: V. Govindaswami
Gnana chuvadi: Isai Nigazhchi
Engal Kalathil (2) Ayan Rajapart Veluswami—Serial skit by R. Arumugham.
Market rates and water level readings.
Topical discussion: weather report.

Wednesday, 12th December 1956—
Malnutrition: Discussion
Folk Art: Kolattam
Gramapattum Katchiyum
Market rates and water level readings.
Topical discussion: weather report

Thursday, 13th December 1956—
Farm Forum: Discussion—Participant: V. Ayyavu Naicker.
Folk Ballad: Raja Desingu—Part I.



Sri C. Subramaniam, Leader of the House in the Legislative Assembly, presenting the speech of thanks to Sri N. Gopala Menon, Speaker.

...du Dittam (10) Welfare of Women and Children : Discussion.
Market rates and water level readings.
Topical discussion : weather report.

riday, 14th December 1956—

Rukmangada : Play.
The Village Welfare Association : Discussion.
Market rates and water level readings.
Topical discussion ; weather report.

turday, 15th December 1956—

Kannikaveri : Song.
The Adult Literacy Class : Tirukkural—Aruludaimai—(Kural Nos. 246 and 248).
Thambi Thambi : Song.
Kashmir : Industries : Discussion.
Weekly review of Market rates
Market rates and water level readings.
Topical discussion : weather report.

nday, 16th December 1956—

Gramam Povome : Programme of interviews, folk arts, etc., recorded at a village.
Market rates and water level readings.
Topical discussion : weatner report.

nday, 17th December 1956—

Fowl-Cholera : Discussion.
Folk Art : Kavadi Attam.
Market rates and water level readings
Topical discussion : weather report.

esday, 18th December 1956—

Farm Forum : Discussion.
Gnana chuvadi : Isai Nigazchi.
Illara cholaiyil (3) Eliyum Ponnaiyum : Serial skit by K. P. Ganapathi.
Market rate and water level readings.
Topical discussion : weather report.

Wednesday, 19th December 1956—

Listeners' Letters Poocharam Songs on Lord Buddha.
Inda Pattai Kettanayya ?
Market rates and water level readings.
Topical dicussion : weather report.

Thursday, 20th December 1956—

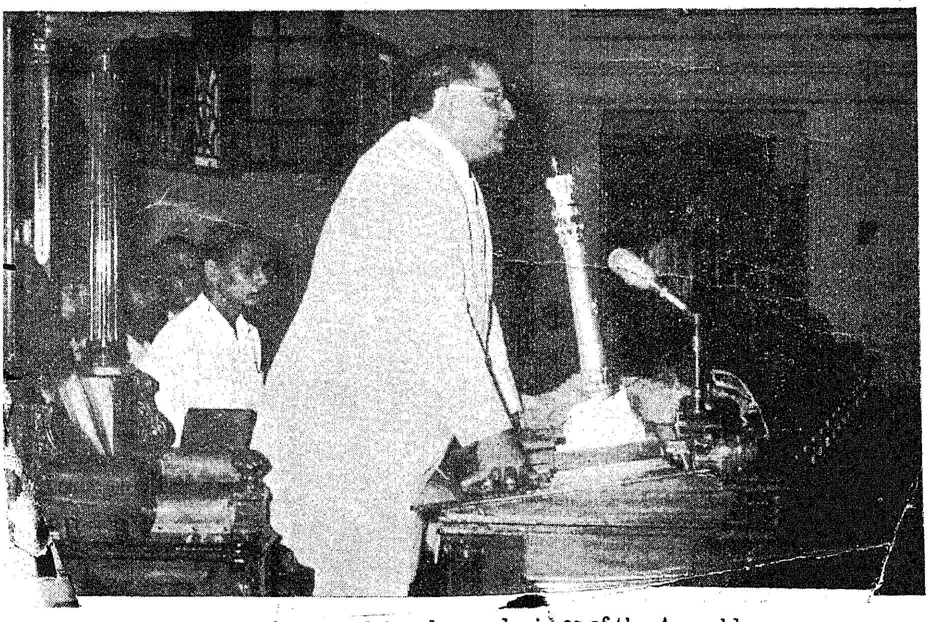
Farm Forum : Discussion.
Folk Ballad : Raja Desingu—Part II.
Namadu Dittam (11) Welfare of Youth : Discussion.
Market rates and water level readings.
Topical discussion : weather report.

Friday, 21st December 1956—

Folk Song Lesson.
Irulil Oli—Serial feature on Gandhiji's life.
The Village Women's Forum : Discussion.
Kalyana Padalgal.
Market rates and water level readings.
Topical discussion, weather report

Saturday, 22nd December 1956—

Kizhakku manam : Song.
The Adult Literacy Class : Tirukkural—Aruiludaimai (Kural. Nos. 249 and 250).
Vellippasumalaiyin : Song.



The Speaker acknowledging the good wishes of the Assembly.

Talk in Tamil arranged by the Chief Engineer, Electricity, Government of Madras.
Weekly review of market rates.
Market rates and water level readings on succeeding days also.

Sunday, 23rd December 1956—

Grama Panchayath : Nila Pirivinai Vazhakku—Feature by N. Vasudev
Varna Mettu : Folk tunes.

Monday, 24th December 1956—

Calf-rearing : Discussion.
Folk Art : Lavani.

Tuesday, 25th December 1956—

Panditha Malaviya : Feature.
Ezhaippangalan—Musical discours by T. S. Marianandam.

Wednesday, 26th December 1956—

Honey as food and medicine : Discussion.
Folk Art : Kalla Part songs.
Questions on the air : Discussion on subjects of rural interest specially those relating to Five-Year Plan.

Thursday, 27th December 1956—

Farm Forum : Discussion.
Folk Ballad : Raja Desingu—Part 12.
Namadu Dittam (12) Public Co-operation : Discussion.

Friday, 28th December 1956—

Bhoomidanam : Feature.
Pattai Kelungal : (Songs on Five-Year Plan).
Metric system : Discussion.

Saturday, 29th December 1956—

Kattile Kalai eduthu : Song.
The Adult Literacy Class : Tirkural—Pulanmaruthal (Kural N 251 and 252).
Temadura Tamizhmozhi : Song.
Radio Interview : Panchayat Bo President—Bheti.

Sunday, 30th December 1956—

Urea Nitrate uram : Discussion.
Varna mettu : Folk tunes.
Onre Kulam : Feature on untouchability.

Monday, 31st December 1956—

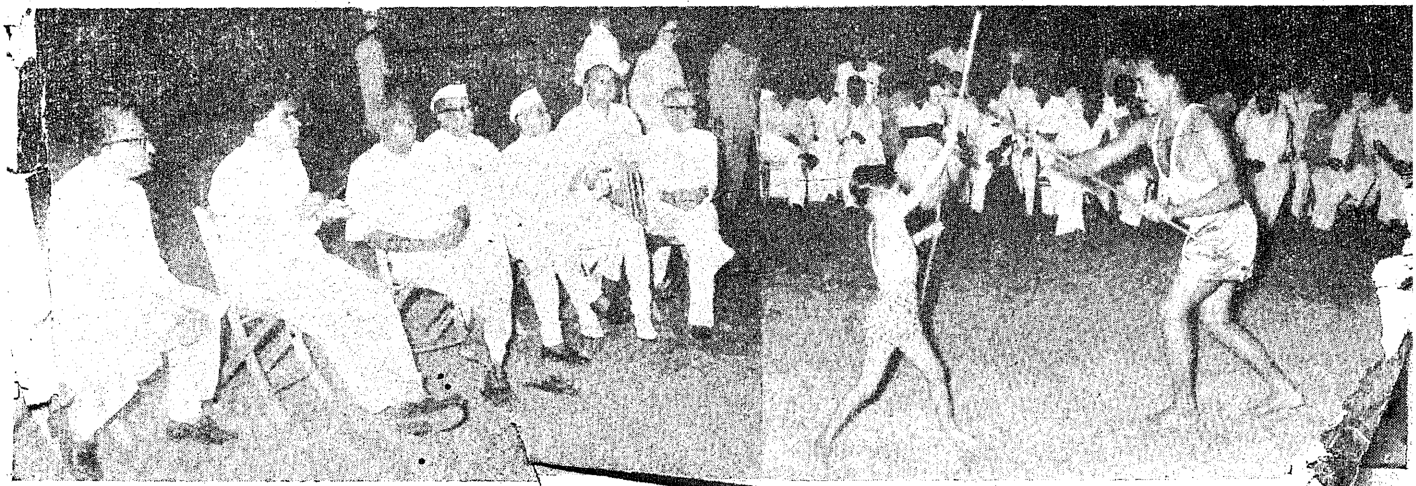
Fodder for cattle : Discussion.
Grama Nataka Sabaiyil : Pattukacheri—Play by N. Raghavan.

Public Holidays for 1957

The Government of Madras have declared the following days as public holidays in the year 1957 :—

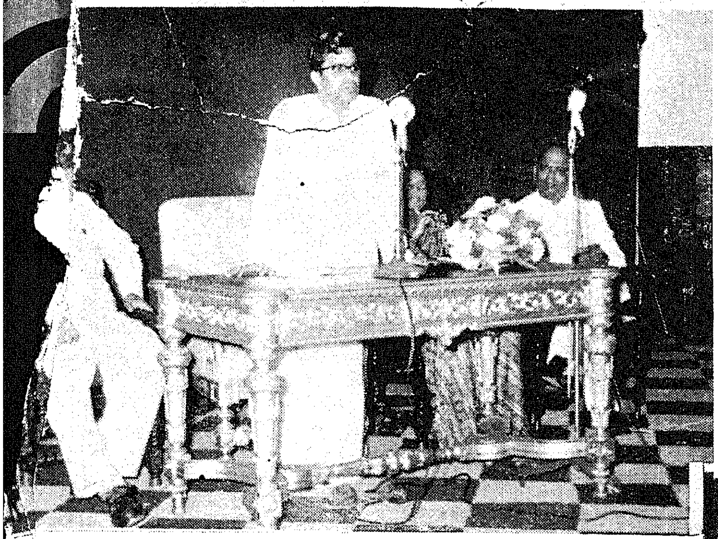
Tuesday, the 1st January	New Year's Day.
Saturday, the 12th January	Vaikunta Ekadasi.
Monday, the 14th January	Pongal.
Tuesday, the 15th January	Mattu Pongal.
Saturday, the 26th January	Republic Day.
Wednesday, the 27th February	Maha Sivaratri.
Monday, the 1st April	Telugu New Year's Day.
Saturday, the 13th April	Tamil New Year's Day.
Friday, the 19th April	Good Friday.
Thursday, the 2nd May	Ramzan.
Saturday, the 29th June	Half yearly closing of Bank Accounts. (Not a holiday for other Government offices including non-bank treasuries.)
Tuesday, the 9th July	Bakrid.
Wednesday, the 7th August	Muharram.
Saturday, the 10th August	Avani Avittam.
Thursday, the 15th August	Independence Day.
Tuesday, the 20th August	Sri Jayanti.
Wednesday, the 28th August	Vinayaka Chathurthi.
Monday, the 23rd September	Mahalaya Amavasya.
Tuesday, the 1st October Wednesday, the 2nd October Thursday, the 3rd October	Ayudha Puja.
Monday, the 7th October	Meeladi Nabi.
Tuesday, the 22nd October Wednesday, the 23rd October	Deepavali.
Wednesday, the 25th December	Christmas.
Tuesday, the 31st December	Annual closing of Bank Accounts. (Not a holiday for other Government offices including non-bank treasuries.)

All Sundays and all Penultimate Saturdays except the Penultimate Saturdays in the months in which Mattu Pongal and Deepavali fall will be holidays.



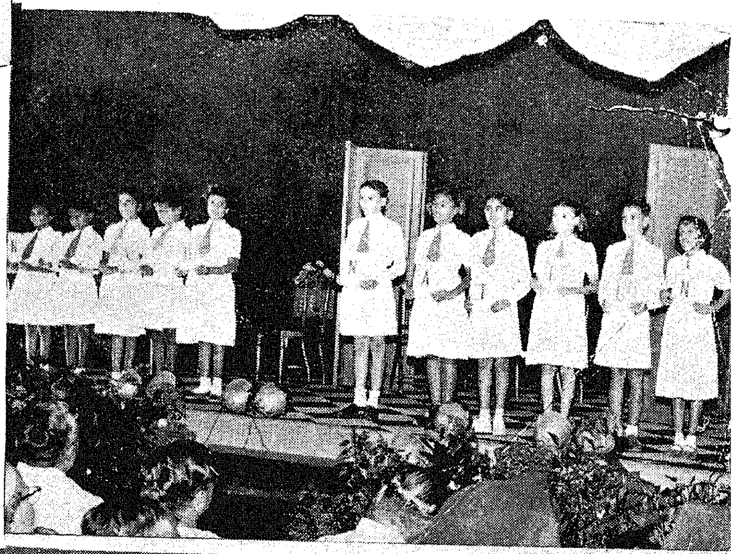
The Malabar Legislators gave a party before taking leave of Madras when ... featured prominent

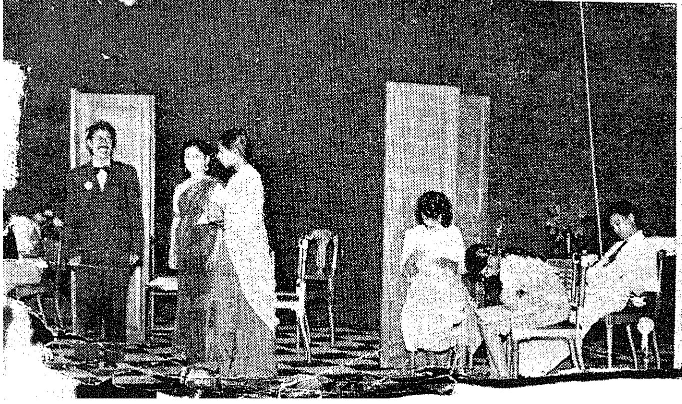
SUPERINTENDENT ... OVERNMENT PRESS, MADRAS, AND EDITED AND PUBLISH...
...TION AND PUBLICITY, GOVERNMENT OF ...

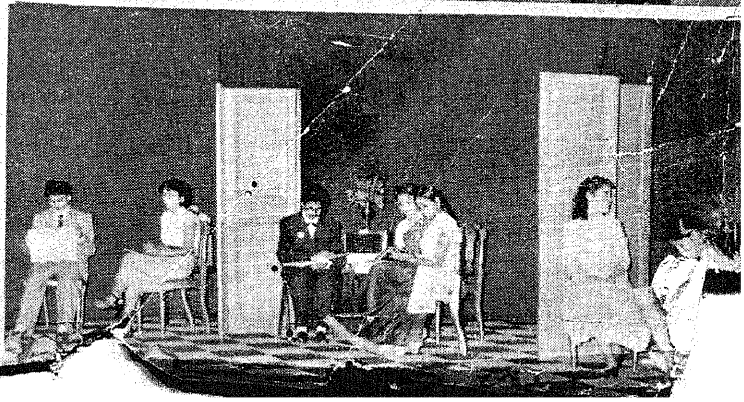


U.N. DAY CELEBRATIONS IN MADRAS

The principles of the United Nations have struck a responsive chord in the emotions of the youth of Madras. Sri C. Subramaniam, Finance Minister, addressed the U.N. Day Public meeting at Rajaji Hall and later witnessed a tableux put on boards by the students.







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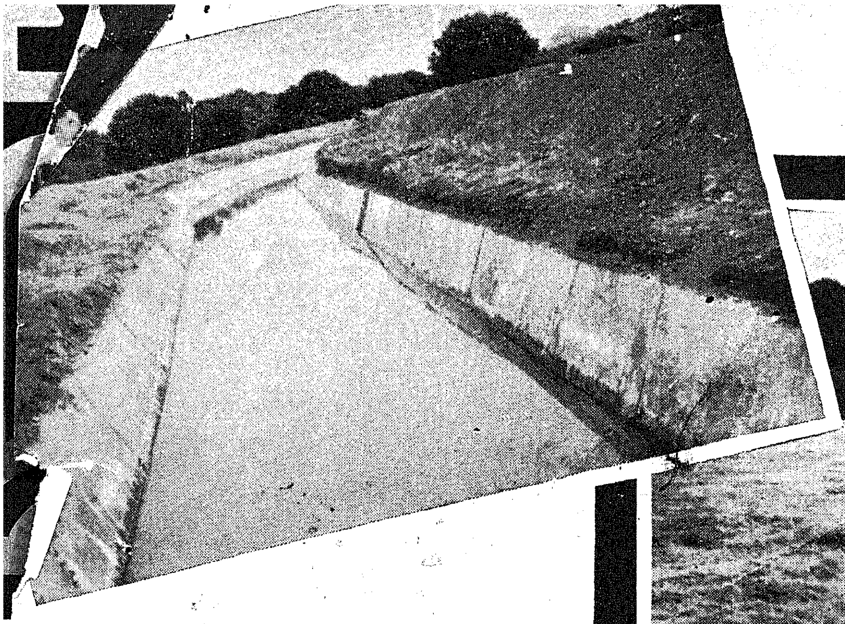
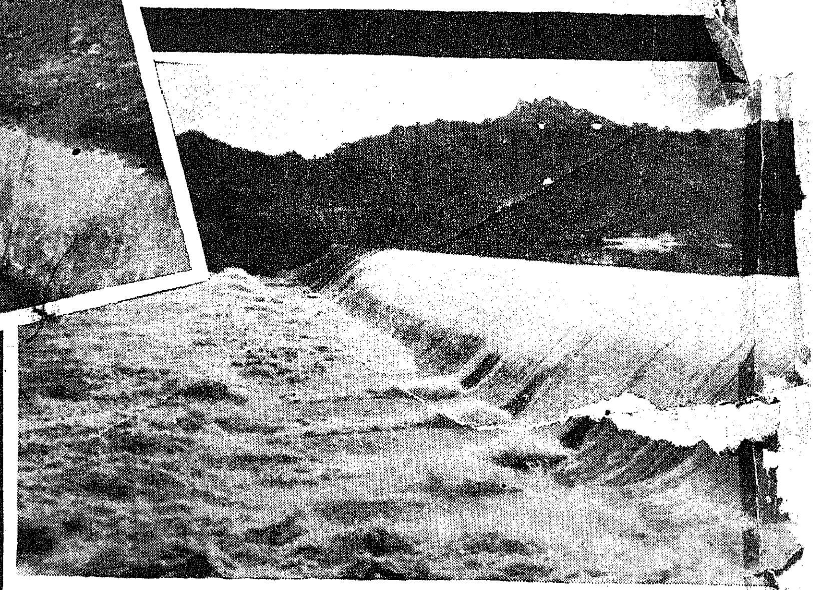
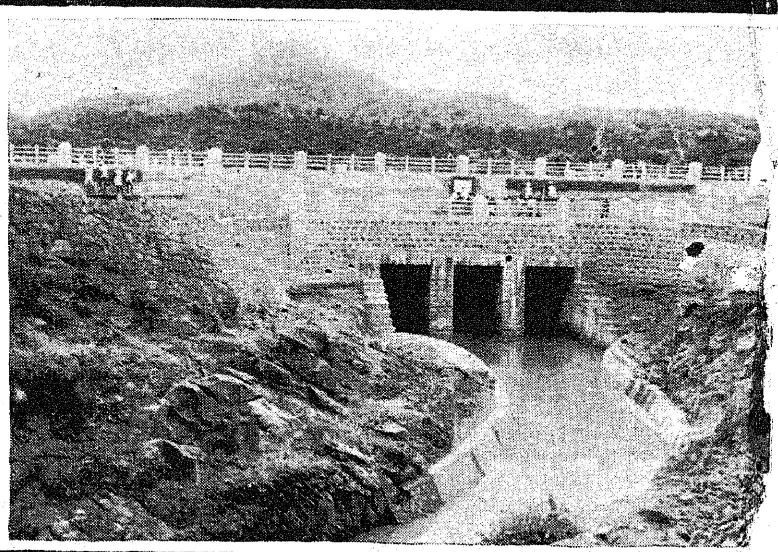
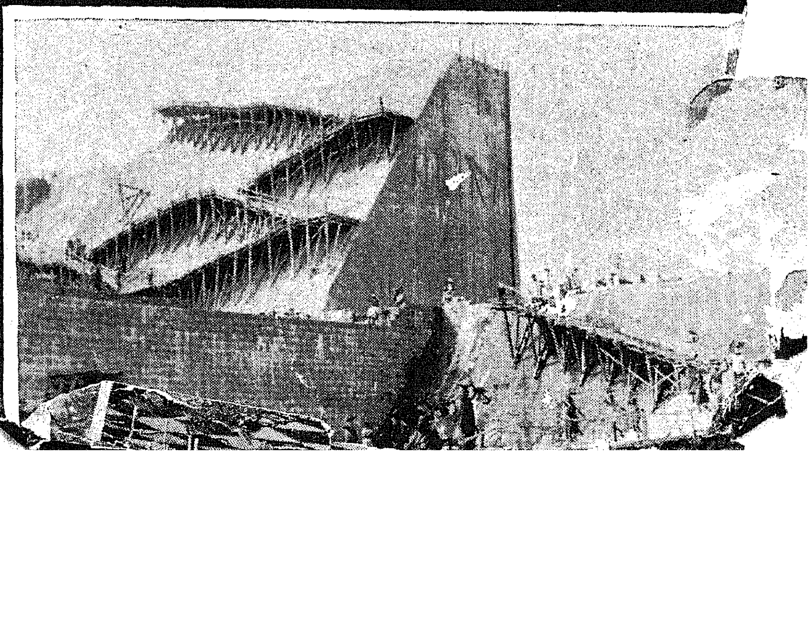




THE WELCOME WATERS OF PONNIAR

The gushing waters of Ponniar harnessed in the Sathanur Project have been let out through canals to bring new life to 15,000 acres of semi arid land in South and North Arcot districts.